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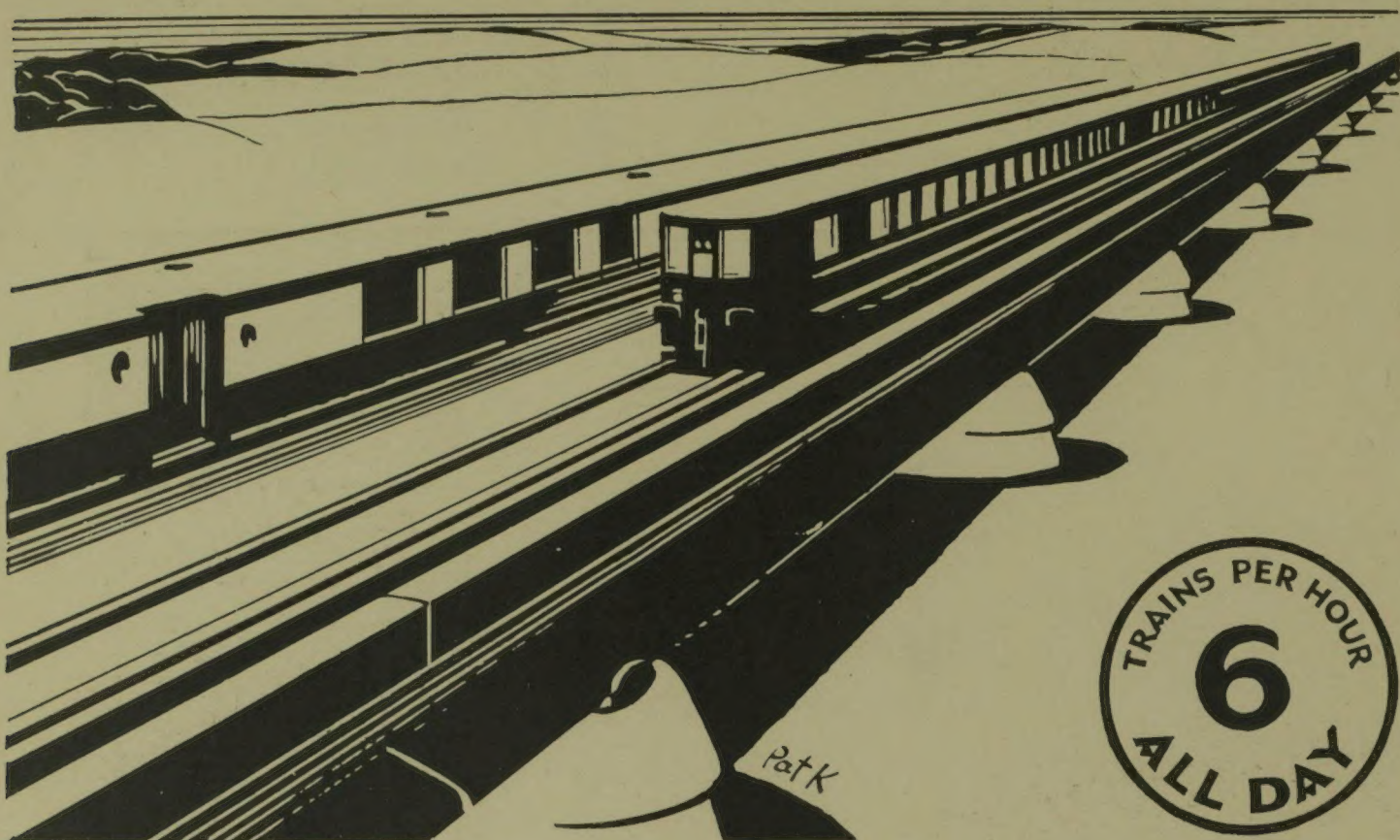
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SATURDAY, DECEMBER 31, 1932.



A FLYING NURSERY: FIVE LITTLE CHILDREN, INCLUDING A THREE-WEEKS-OLD BABY IN A CRADLE, IN AN AIR-LINER'S CABIN ON A JOURNEY TO BAGHDAD.

Nurseries have recently been provided in big Imperial Airways liners on two long journeys, one of which is here illustrated. Five children, of two families, with their mothers and a native maid, are seen in the forward saloon of a "Hannibal" type aeroplane, arranged for the purpose, during a flight from Cairo to Baghdad. The youngest was a baby three weeks old, in a cradle,

and the eldest was only four. They had previously crossed from Athens to Alexandria in a flying-boat. When Sir Hubert Young went out as Governor of Nyasaland, he and Lady Young, with three children and a nurse, travelled by air-liner from Cairo to Kisumu, thence in a "Hercules" to Salisbury, and completed the journey in three Puss Moth machines of the Rhodesian Aviation Co.

DRAWN BY OUR SPECIAL ARTIST, C. E. TURNER.



By G. K. CHESTERTON.

AS this article will presumably appear just after Christmas, and as my last article appeared just before Christmas, I will take the liberty of continuing and concluding, in this place, an argument which I had to dismiss rather hurriedly last week; an argument which affects the celebration of Christmas itself. It turned on the question of what is meant by humanity being complete, in its balance of culture and customs, and how far this is affected by that extreme evolutionary theory of progress, which shows Man at any moment incurably incomplete.

I noticed that in Mr. Bernard Shaw's new parable, about the Black Girl in search of God, he repeats a notion which he and others have often suggested. It is the notion of not only being an uncompleted man, but of worshipping an uncompleted God. This amused me a little, for it struck me at once that the progressive Futurist and Fabian, who talks about his divinity as "not being properly made up yet," is, in fact, doing exactly what the Black Girl and all the most abject African savages are accused of doing. The Hebrew Prophets, whom Mr. Shaw almost admires, and the modern missionaries, to whom he is very nearly polite, have both of them always bombarded idolaters and fetish-worshippers with denunciations of the most illogical and grotesque fact about their faith: the fact that they "worship the work of their own hands." The black African savage takes a handful of mud, pokes and pulls it about into a particular shape that is entirely the product of his own fancy, and then, although he knows he has just made the thing himself, manages to fall down and worship it, as if it were the maker of all things. And it seems to me that the evolutionary theists of the type of Mr. Bernard Shaw or Professor Julian Huxley do exactly and precisely the same thing. They manage to make a god themselves; and then somehow manage to adore it as the god that has made them. This seems stupid to my simple mind; as it did to the simple minds of the Hebrew Prophets, of the Moslem law-givers, and the modern missionaries in Africa. It is manufacturing an artificial faith, and then expecting it to be as natural as nature and as supernatural as God. In short, this extraordinary faith-worship is so very like ordinary fetish-worship, from a rational standpoint, that I do not wonder that the Black Girl could pass so rapidly from one to the other. As an old-fashioned person, who still believes that Reason is a gift of God and a guide to truth, I must confine myself to saying that I do not want a God whom I have made, but a God who has made me. But that is not the question, the lighter and lesser question, which I meant to raise in connection with this matter of a completed humanity. Mr. Shaw's idea is only connected with that by the thin and fantastic thread of his theory of a progress permanently incomplete.

Perhaps we might call the two antagonistic philosophies the philosophy of The Tree and the philosophy of The Cloud. I mean that a tree goes on growing, and therefore goes on changing; but always in the fringes surrounding something unchangeable. The innermost rings of the tree are still the same as when it was a sapling; they have

ceased to be seen, but they have not ceased to be central. When the tree grows a branch at the top, it does not break away from the roots at the bottom; on the contrary, it needs to hold more strongly by its roots the higher it rises with its branches. That is the true image of the vigorous and healthy progress of a man, a city, or a whole species. But when the evolutionists I speak of talk to us about change, they do not mean that. They do not mean something that produces external changes from a permanent and organic centre, like a tree; they mean something that changes completely and entirely in every part, at every minute, like a cloud. There is no core of a cloud; there is no head or tail that cannot turn into something else; it not only

thinkers such as Mr. H. G. Wells, in some respects not unlike weasels; and now it is once more assuming vaster and darker outlines, more monstrous and more mysterious, as adumbrated in Mr. Shaw and his Hebrew Prophets: very like a whale. For Mr. Shaw really gives me the impression that he is still to some extent brooding on how the whale could have swallowed Jonah, or how anybody can swallow the whale.

Now, if this merely cloudy and boneless development be adopted as a philosophy, then there can be no place for the past and no possibility of a complete culture. Anything may be here to-day and gone to-morrow; even to-morrow. But I do not

accept that everlasting evolution, which merely means everlasting chaos. As I only accept the organic and orderly development of a thing according to its own design and nature, there is for me such a thing as a human culture that is reasonably complete. Only the modern, advanced, progressive, scientific culture is unreasonably incomplete. It is, as Stevenson said, "a dingy ungentlemanly business; it leaves so much out of a man." Now, the things that it leaves out of a man are almost exactly the things that a proper understanding of Christmas, and the old religious festivals of the race, would probably put into a man. There is the right idea of dignity, with its companion, the right idea of buffoonery; there is the real psychological understanding of the motives of mummery and masquerade. There is that spirit, now almost entirely lost, which led our fathers to describe even their revelry and gaiety as the "high solemnities" of the festive occasion. There is the profound meaning that lies in the word "mummery," and its connection with the notion of being mum. There is the yet more profound significance in the word "mystery," which also is really the Greek for being mum. In short, there is the idea that, even on the festive occasion, naturally full of talking and singing, the most sensational thing is silence. All this is full of the now neglected idea that some things are better for being kept in reserve; that the best of all games of hide-and-seek is that in which something remains hidden; and that the solemn and religious ceremonial of hunt-the-slipper is most impressive when the slipper cannot be found. All these old ideas of silence, of sacrifice, of a secret worth keeping, inherited in the old type of festivity

that had a religious origin; and the modern fashionable festivity is, in comparison, barren and brassy and shrill because it has an irreligious origin. It is significant that in recent days every sort of public entertainment has been called "a show," with the implication that as much as possible must be shown. Sometimes it is hoped that the show will lead to what is called a show-down, but it seems to me more probable that the whole of this modern notion of a show will end by being shown up. For its weakness is, according to the sacred philosophy of the tree, that it has no roots or its roots are very shallow; it is too recent to be rooted in the subconsciousness or to have anything of the dimension of depth, in the matter of memory and what is called "second nature." There is not enough of the momentum of mankind behind it, and it wavers and grows weary even before our eyes.

Special Notice to Our Readers.

WE hereby inform our readers that we shall publish in the next issue of "The Illustrated London News" (dated January 7, 1933) a number of REMARKABLE PHOTOGRAPHS THAT REVEAL FOR THE FIRST TIME THE FULL SPLENDOURS OF THE NEST OF FOUR GREAT GOLDEN SEPULCHRAL SHRINES WHICH SHIELDED THE SARCOPHAGUS OF THE BOY-KING TUTANKHAMEN.

With the aid of these photographs, which are exclusive to "The Illustrated London News," it is possible to realise, as it has never been possible before, the superb craftsmanship and the beauty of detail that make the shrines a wonder of the world.

Will our readers please note that it would be well if they ordered without delay such copies of the issue as they require, as it is certain that the demand for this number of "The Illustrated London News" will be very great? Orders should be given to bookstall or newsagent, or sent to the Publisher, "The Illustrated London News," 346, Strand, London, W.C.2. The price is, of course, one shilling, as usual.

changes, but it is itself only a prolonged change. While Hamlet and Polonius stood looking at the cloud, it will be remembered that, in those few minutes, the prince could persuade the courtier that the cloud had a hump like a camel, that it was a weasel, and that it was a whale. That is the cosmos as understood by these cosmic philosophers; the cosmos is a cloud. It changes in every part; nor is one part more permanent or even more essential than the other. For that matter, of course, the cosmic philosophers change as much as their cosmic cloud. When I was a boy, the universe was conceived under the image of the sick camel of Schopenhauer; a cosmos which certainly had the hump. After that, the Will to Live, which had been mournfully accepted by Schopenhauer, was carried forward with much greater briskness and tenacity by practical

THE PROTOTYPE PORTRAIT OF CHRIST?

COPIES OF EARLY CHRISTIAN FRESKO HEADS

(FROM THE CATACOMBS) FOUND IN LONDON.

ARTICLE BY THE REV. C. C. DOBSON, M.A., VICAR OF ST. MARY IN THE CASTLE, HASTINGS.

THE intensely interesting drawings reproduced here were recently discovered in the British Museum by the Rev. C. C. Dobson, son of the late Austin Dobson. They were done in Rome by a British artist, but, though recorded and described, some of them have apparently never been published before. Mr. Dobson himself writes: "All are familiar with the traditional likeness of Our Lord, but its origin has always been a matter of speculation. When Constantine legalised Christianity, in the early fourth century, numerous likenesses were produced, and obviously some earlier portrait existed, which formed the original upon which these were based. Various so-called authentic likenesses exist. 'The Illustrated London News' reproduced in May 1931 photographs of the famous Shroud of Turin, which claims to be the cloth in which Our Lord's body was wrapped for burial. St. Peter's at Rome, and St. Bartholomew's at Genoa, each treasures a cloth with a reputed likeness, the claims for which rest on traditional miracles. There is also a small portrait said to have been carved upon an emerald for the Emperor Tiberius, and afterwards presented to Pope Innocent VIII, by an Emperor of the Turks, from the Treasury at Constantinople, for the redemption of his captive brother. Associated with this portrait is preserved a document containing a remarkable description of Our Lord, stated to have been written by a Roman officer stationed in Palestine in Our Lord's time, and addressed by him to the Roman Senate. The tradition behind this document does not appear to be older than the seventh century, but it was probably based on an earlier tradition. Traditions also exist that St. Luke was an artist, and painted Our Lord. It is not proposed to assess the value of these various traditions, except to say that they are mostly of late date, and largely rest upon miracles. St. Augustine tells us definitely that no portrait of Our Lord, executed during life, existed in his time. The early Christians, too, appear to have refrained generally from attempting to produce likenesses afterwards. They had, however, a custom of covering the faces of their dead with small cloths on which the face of Our Lord had been drawn, the idea being that Our Lord should cover the dead; and probably some likeness, drawn for this purpose, became the origin of fourth-century traditional likenesses. Maitland, in his 'Church in the Catacombs' (2nd edition, 1847), says that no early likenesses were to be found in the Catacombs, the earliest he knew of being fourth century. But at about the time of Maitland's book a distinguished British portrait painter named Thomas Heaphy was at work in the Catacombs, and found a faded fresco, here illustrated (Fig. 1), which was certainly first or early second century and which, from its position on the ceiling of a vault in the Catacomb of Saints Achille and Nerio, must have been executed to cover the dead interred in the vault. De Rossi supplies proofs that this Catacomb, originally known as that of St. Domitilla, is first century. It is quite possible, therefore, that this portrait may have been the original of all later traditional likenesses. Heaphy copied it with the utmost care, and he does not appear to have published it, nor have we been able to find that it has since been found and copied. Heaphy's original drawing is in the British Museum. It would be interesting to ascertain from Rome whether this fresco is still visible, or has quite faded away. Heaphy was also fortunate enough to be allowed to view a very precious relic preserved in the Church of St. Praxedes at Rome. It consists of a small handkerchief with a faint outline (Fig. 2) said to be that of Our Lord, and drawn by

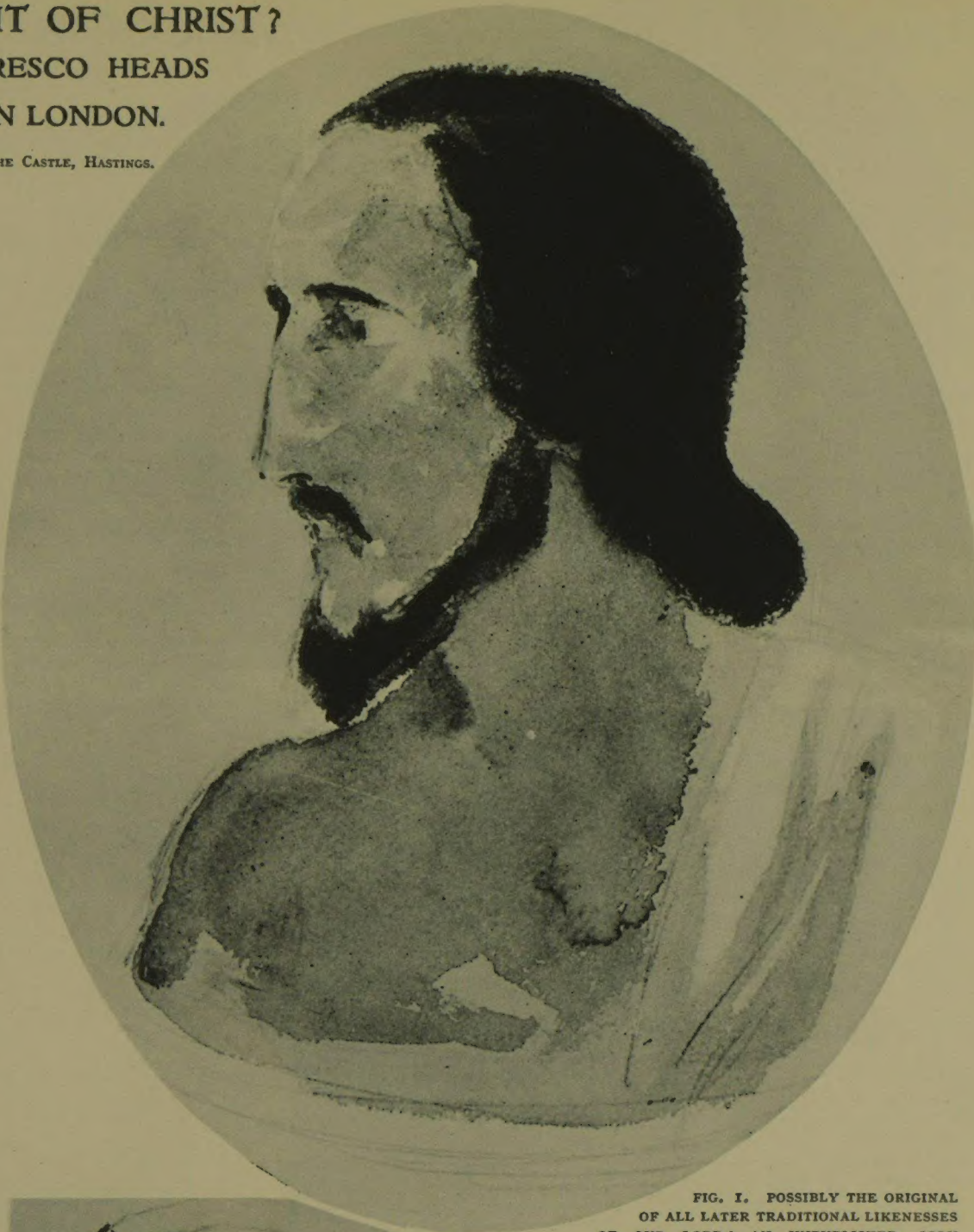


FIG. 1. POSSIBLY THE ORIGINAL OF ALL LATER TRADITIONAL LIKENESSES OF OUR LORD: AN UNPUBLISHED COPY (FOUND IN THE BRITISH MUSEUM) OF A DRAWING BY THOMAS HEAPHY MADE (ABOUT 1847) IN THE CATACOMBS AT ROME FROM A 1ST OR EARLY 2ND. CENTURY FRESKO.



FIG. 2. A PORTRAIT OF OUR LORD SAID TO HAVE BEEN DRAWN FROM MEMORY BY ST. PETER: THOMAS HEAPHY'S COPY OF A HEAD FAINTLY OUTLINED ON A HANDKERCHIEF KEPT AS A RELIC IN THE CHURCH OF ST. PRAEDES AT ROME.



FIG. 3. A HEAD OF ST. PAUL, IN GOLD AND BLUE ENAMEL, ON A GLASS BOWL FOR HOLY COMMUNION OF THE FIRST OR THE EARLY SECOND CENTURY: A DRAWING BY THOMAS HEAPHY.

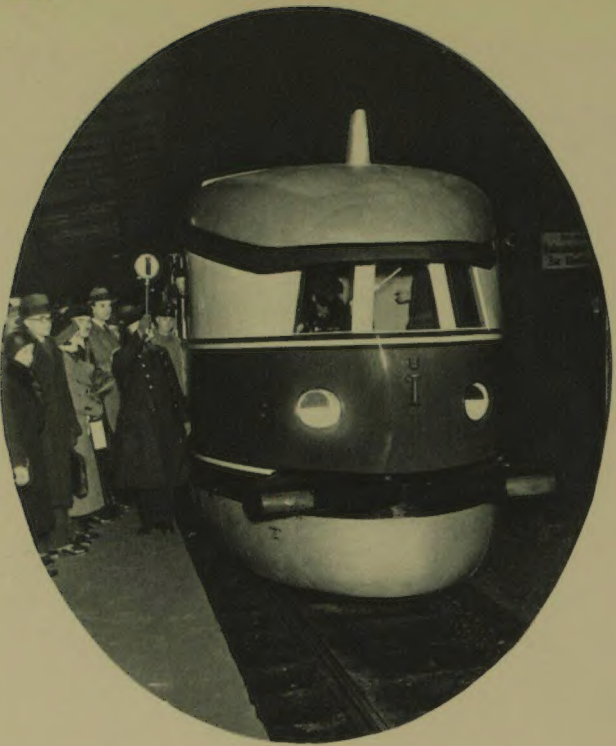
St. Peter from memory at the request of the daughters of Pudens and Claudia. Circumstantial evidence bears out the tradition. Pudens and Claudia, who according to Martial were British, resided in a palace said to have been that of Caractacus, and certain traditions state that Claudia was his daughter. Both St. Peter and St. Paul stayed in their palace. Independent evidence records that, when the Neronian persecution broke out, their daughters Praxedes and Pudentiana rescued the remains of many martyrs, and interred them in the grounds of their palace, part of which Praxedes constituted a secret church, which is still known by her name. The present church is ninth century, but traces of the earlier remain. What is more probable than that they, needing a cloth to cover the dead, requested St. Peter, their guest, to draw Christ's head on it from memory? In 320 A.D., after Christianity was legalised, the Empress Helena, mother of Constantine, was shown the relic with this tradition attached, and carefully preserved it in a casing of silver and enamel, a section of which Heaphy copied.

First and early second century Christians used little glass bowls or *patera*, for Holy Communion. On these bowls Christian pictures or symbols were worked in gold and enamel. They were always buried with the dead, and large numbers from the Catacombs are in the Vatican. The British Museum has about thirty. These little pictures are of special interest in that any portraits are of this assured early date. Heaphy copied many, including one of St. Paul (Fig. 3), in gold and blue enamel, and one of Linus (Fig. 4). Irenæus and Eusebius record that Linus was consecrated, probably about A.D. 66, Bishop of Rome. Clement of Rome tells us he was a brother of Claudia, and therefore British. St. Paul mentions him in his second Epistle to Timothy (iv., 21), written just before his martyrdom in A.D. 67 or 68."



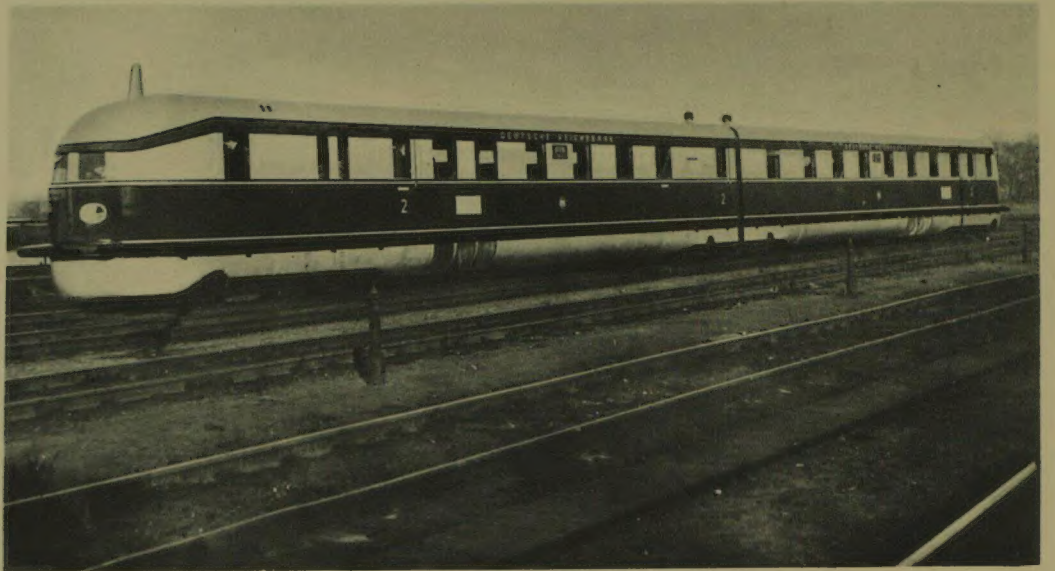
FIG. 4. A FIRST-CENTURY BISHOP OF ROME BELIEVED TO HAVE BEEN OF BRITISH BIRTH: AN ENAMEL HEAD OF LINUS FROM A COMMUNION BOWL—COPIED BY THOMAS HEAPHY.

THE CAMERA AS RECORDER: NEWS BY PHOTOGRAPHY.



ONE OF THE TWO "NOSES" OF GERMANY'S FASTEST TRAIN: THE "FLYING HAMBURGER" LEAVING BERLIN BEFORE AVERAGING 75 M.P.H. OVER 178 MILES.

A new type of express was tested on the German State Railways on December 19 between Berlin and Hamburg. The "Flying Hamburger" consists of two coaches, each with a blunt and a rounded end. In the nose of each coach is a 400-h.p. Maybach Diesel engine operating a dynamo. So perfect is the streamlining that there are practically no projecting surfaces. Foot-boards are recessed behind the doors and head-lights inset in the coachwork. The train



THE FASTEST TRAIN IN GERMANY, IF NOT IN THE WORLD, ON A TRIAL RUN: THE ELABORATELY STREAMLINED DIESEL-ELECTRIC "FLYING HAMBURGER"—WITH A BLUNT AND A ROUNDED END TO EACH COACH.

can be driven in either direction. On its run between Berlin and Hamburg on December 19 it covered the 178 miles in 140 minutes—an average speed of about 75 m.p.h. and nearly 40 minutes less than the regular Berlin-Hamburg express, the fastest steam-train in Germany. It is thought that only the Swindon-Paddington express, which is timed to average 71.3 miles an hour, will be able to challenge the "Flying Hamburger's" claim to be the fastest train in the world.



THREE "GODS" OF MODERN RUSSIA IN ONE PORTRAIT: A MOSCOW SIGN WHICH REPRESENTS MARX, LENIN, AND STALIN ACCORDING TO THE POSITION FROM WHICH IT IS VIEWED. (HERE: STALIN.)

This ingenious slatted sign, erected in a Moscow street, combines in one "canvas" the coloured portraits of three men now honoured in the U.S.S.R. Looked at from the front it reveals the white-bearded visage of Marx, whose "Das Kapital" is the Bible of Socialism; when it is viewed from the left, Stalin, head of the present régime, is seen; and seen from the right there stands



THE SIGN SHOWING A COLOURED PORTRAIT OF KARL MARX WHEN SEEN FROM IN FRONT—STALIN APPEARS WHEN IT IS VIEWED FROM THE LEFT; AND LENIN WHEN IT IS VIEWED FROM THE RIGHT.

out the head of Lenin, whose memory is regarded in modern Russia with little short of worship. It is an admirable and economical device for reminding passers-by of the trinity to which they owe the prevailing system of government. Moscow children are clearly full of admiration.



THE TREASURE OF THE WEEK AT THE VICTORIA AND ALBERT MUSEUM: AN AQUATINT OF WINDSOR CASTLE BY WILLIAM DANIELL.

William Daniell, who was born in 1769 and died in 1837, is known chiefly by the numerous aquatint plates which he produced for his "Voyage Round Great Britain" and other works. The print here illustrated, showing Windsor Castle from the Brocas Meadow, is one of a set of twelve views of Windsor in colour aquatint published about 1830, shortly after the reconstruction of the round tower. The original series is comparatively rare, and the reprints of 1862 with the costume altered and Victorianised, are perhaps better known.



A DRAWING BY QUEEN VICTORIA SOLD FOR £4 10S.: A WATER-COLOUR DONE WHEN SHE WAS TWELVE.

Those who remember that Queen Victoria wrote a book—it was called "Leaves from the Journal of a Life in the Highlands"—may be surprised to learn that she also had artistic leanings. This drawing was sold thirty-one years ago for £45, but at Christie's on December 18 the price was £4 10s.

FRESH FINDS OF GOLD: "LUCKY STRIKES" IN KENYA AND NEW ZEALAND.



A TYPICAL CLAIM ON NEW KENYA GOLD-FIELDS: THE PRESENT HEADQUARTERS OF THE KOA MINING SYNDICATE, WITH SOME OF THE STAFF.



A NUGGET, WORTH ABOUT £50, FOUND ON THE KOA MINING SYNDICATE'S CLAIM: AN EXAMPLE FROM THE NEW KAKAMEGA GOLD-FIELDS IN KENYA.



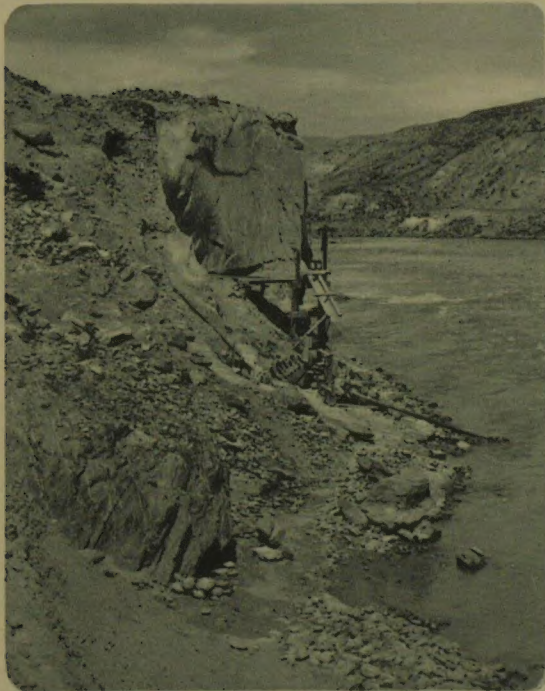
GOLD-GETTING IN KENYA: A PAN BEING WASHED FROM A RICH "STRINGER" JUST FOUND, CARRYING GOLD AT ABOUT FIFTY OUNCES TO THE TON.



A RELIC OF FORMER GOLD-FINDING IN NEW ZEALAND NEAR THE SCENE OF A RICH NEW "STRIKE": THE WRECK OF THE OLD "LADY RANFURLY" DREDGE, WHICH OBTAINED THOUSANDS OF OUNCES OF GOLD FROM THE KAWARAU RIVER IN 1899 AND 1900.



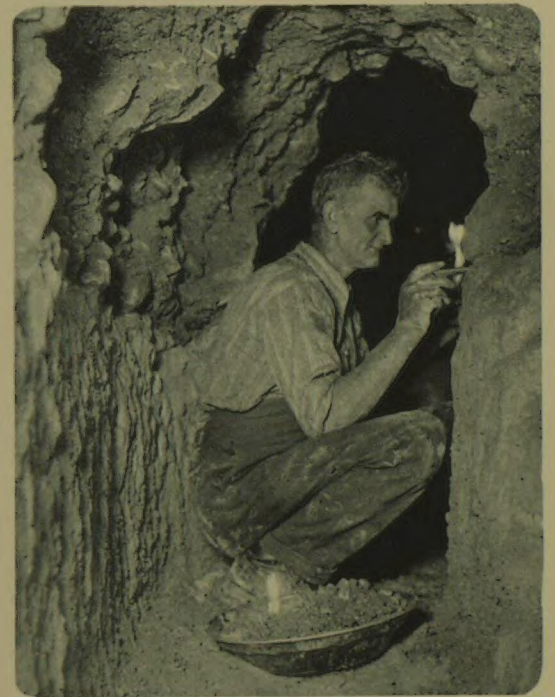
A RECENT HAUL (WORTH AT PRESENT OVER £600) FROM A CLAIM BESIDE THE KAWARAU RIVER IN CENTRAL OTAGO, SOUTH ISLAND, NEW ZEALAND: 50 OZ. OF GOLD SECURED BY MESSRS. PERCY BELL AND W. M. KILGOUR—THE BIG NUGGET WEIGHING 15 DWT.



THE FACE OF THE CLIFF WHERE THE LUCKY STRIKE WAS RECENTLY MADE—IN A TUNNEL WHOSE ENTRANCE IS JUST TO THE LEFT OF THE SHUTE SEEN IN THIS PHOTOGRAPH.



NEW ZEALANDERS WHO "STRUCK LUCKY" WHILE PROSPECTING UNDER A GOVERNMENT-SUBSIDISED SCHEME FOR UNEMPLOYED: MR. W. M. KILGOUR (LEFT) AND MR. PERCY BELL.



PICKING OUT GOLD NUGGETS AT THE END OF THE 180-FT. TUNNEL, IN A RICH PATCH OF ALLUVIAL GRAVEL: MR. WILLIAM BELL, FATHER OF MR. PERCY BELL.

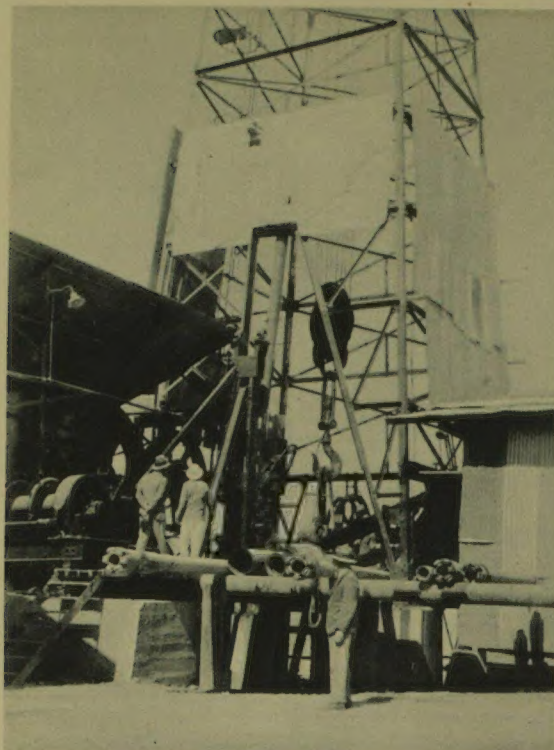
New discoveries of gold have been made in various parts of the Empire, including an extension of the Rand Main Reef, and the finds here illustrated—on the Kakamega gold-fields in Kenya and beside the Kwarau River in New Zealand. Describing the former, a Kenya correspondent writes, concerning the three upper photographs: "The gold-field is as yet in a very primitive state, and it will probably be two or three years before big business really starts, but the outlook is very promising and some rich strikes have been made. There is no doubt the gold is there, and the field appear to have a big future." A favourable report on Kenya's mineral resources was lately made by Sir Albert Kitson.

Regarding our five lower photographs, a correspondent writes from Dunedin: "Considerable excitement was caused in New Zealand by the discovery of what appears to be a very rich gold lead near the Kwarau Gorge, Cromwell, central Otago. The New Zealand Government has been subsidising prospecting by unemployed, and two young men, Messrs. P. Bell and W. Kilgour, determined to try again in a place named Scotland's Beach after an old prospector who won a fortune there about 1870. They decided to tunnel through the solid sandstone. For six weeks they tunnelled away, through 180 ft. of the rock, until suddenly they came into a gravelly patch of extremely rich 'wash.'"

THE ROMANCE OF PERSIAN OIL: WILDERNESS AND MUD FLAT

TRANSFORMED INTO CENTRES OF CIVILISATION AND INDUSTRY AS A RESULT OF THE D'ARCY CONCESSION.

By J. W. WILLIAMSON, B.Sc., Author of "In a Persian Oil-field."



DRILLING IN PROGRESS: A TYPICAL OIL-WELL; SHOWING, NEAR THE HEAD OF THE MAN ON THE GROUND, THE CIRCULAR BITS WHICH GRIND ROUND THROUGH THE ROCK.

AMONG the foothills of the Bakhtiari Mountains, in the province of Khuzistan, about thirty-five miles east of the ancient Persian city of Shushtar, there is the ruin of a Zoroastrian Fire Temple, known as Masjid-i-Sulaiman (Solomon's Temple). From the first years of the Christian era down to less than thirty years ago, the region about that temple was a wilderness of crumpled hills bare of trees and of verdure. There were no roads, but only mule tracks, which nomadic tribes with their flocks and herds traversed twice a year in their search for grass, migrating northwards to the mountain valleys for the summer and southwards to the desert plains for the mild winter. Except for a few scattered villages, the loneliness of that hilly wilderness was broken only by the nomads or by wild beasts. In that same region there is



RECORDING AN OIL-WELL'S OUTPUT: THE BLAZE CAUSED BY THE FIRING OF OIL WHICH HAS PASSED THROUGH A PIPE AT THE WELL-HEAD AND IS BEING BURNED THAT IT MAY NOT FLOW OVER THE GROUND.

to-day, over an area of about 200 square miles, a thriving industrial population of some 30,000 people, provided with most of the material conveniences of modern civilisation—roads, railway, electric light and power, pure water supply, substantially built houses, hospital, telegraphs, telephone and "wireless," schools and workshop training-centres, clubs, amusement hall, playing fields, and even a race-course.

A similar transformation has been effected at the island of Abadan, at the head of the Persian Gulf. On a site which, also less than thirty years ago, was nothing more than a mud-flat, there is to-day a busy industrial town peopled by some 50,000 souls, and provided equally with those amenities of civilisation which have just been enumerated. Adjoining Abadan, on the left bank of the Shatt-el-Arab, is a great port, Bawarda—"the Swansea of the East"—where ships, principally tankers, come and go at a rate of about two a day.

It was the discovery of oil, and the subsequent development of a great oil industry, that effected these and other marvellous transformations in what was virtually a derelict region of the Middle East.

In 1901, the then Shah of Persia granted to the late William Knox D'Arcy an exclusive concession for the exploitation of petroleum throughout the whole of Persia, excepting the five northern provinces that border the Caspian Sea. It was on May 26, 1908, that, near to Masjid-i-Sulaiman, the drill struck through the hard cap rock and a "gusher" came in, which revealed the existence

of what is now known to be one of the world's greatest oil-fields. To take over the D'Arcy Concession and to work and develop this discovered field, the Anglo-Persian Oil Company was incorporated in April 1909. Besides the Masjid-i-Sulaiman oil-field, two other fields within the original concession area were subsequently discovered—one at Naft Khaneh, about 100 miles north-east of Baghdad, and the other at Haft Kel, about forty miles south-south-east of the parent field. The present annual production of oil from the Persian fields is about 6,000,000 tons.

Immediately on the discovery of this great source of oil beneath the crust of the earth, the company was faced with three essential and urgent tasks: to build and equip a refinery for the treatment of the crude oil; to bring the refinery into organic connection with the oil-field on the one hand, and, for purposes of world distribution, with the sea on the other; and to explore the oil-field until its subterranean structure was known almost as completely as the topography of the surface area. The refinery was constructed at Abadan, and a port was equipped close by for the loading of the tankers with crude oil and refined products. To transport the crude oil from Masjid-i-Sulaiman to the refinery at Abadan, a system of pipelines, nearly 150 miles long, was laid across the hills and over the desert, and powerful pumping stations, spaced at intervals of about thirty miles, were erected to keep the oil moving through the pipe.

All the material for these great constructive works had to be imported and, for a great part, to be transported over desert, hill, and river, in a region then devoid of roads, bridges or railway. Moreover, the labour needed for this pioneering work had to be recruited, in large part at least, from nomadic tribesmen unaccustomed to the discipline of regular industrial employment, prone to occasional lawlessness, and with the call of the nomadic life in their blood.

Simultaneously with the well-drilling, roads and bridges were built, a light railway was constructed, a river transport service was organised, electric power stations were erected, engineering workshops es-

tablished, and an adequate supply of pure water provided. The detailed story of how all these things were done is, in sober truth, one of the epics of industry.

The difficulties of the human problem were not less than those presented by the nature of the terrain in which the work had to be done. There was no existing social framework that could accommodate a new and great industry, and therefore, simultaneously with the work of industrial organisation, a new social structure had to be built from the foundations out of the human material available. The solving of this sociological problem is one of the most fascinating phases of the company's work. It is significant that one of the earliest services to be established was a medical and surgical service. At Masjid-i-Sulaiman, at Abadan, and, roughly half-way between these centres, at Ahwaz, the company has built, equipped, and staffed hospitals which it maintains entirely at its own cost. These hospitals provide medical and surgical treatment, not only for the

sick employees of the company, but also for all their families and dependents, as well as for others of the local population, to whatever race they may belong, who are unable otherwise to obtain medical or surgical attention in their need. These healing services have been, obviously, a great boon to the Persian population in the localities served.

After health, housing and education. The social services



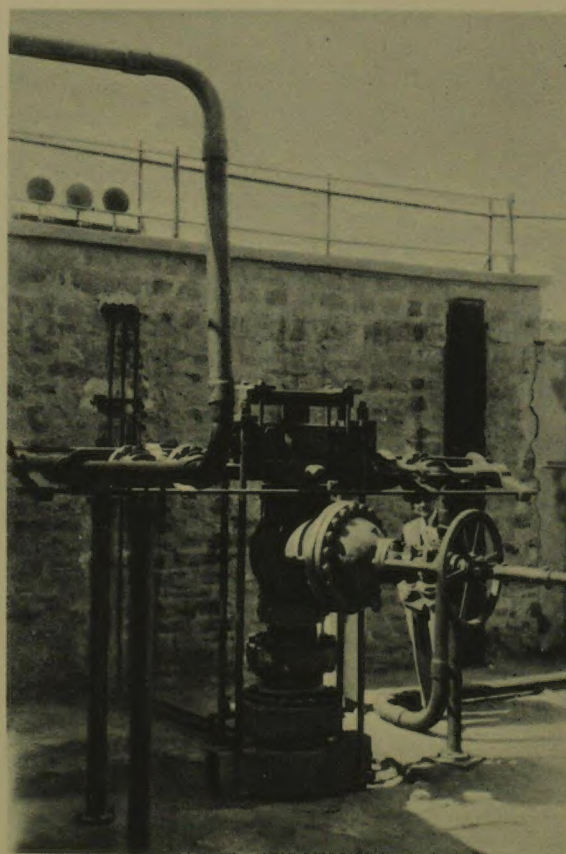
CROSSING 150 MILES OF DESERT TO THE REFINERY AT ABADAN: PIPES THROUGH WHICH PASS ALL B.P. PETROL, MOST ADMIRALTY FUEL, AND A GREAT DEAL OF OTHER PRODUCTS OF THE WELLS.

were further developed by the planning and execution of housing schemes as well for the Persian and other labourers as for the higher staff. There was also established, in close co-operation with the Persian Government, a comprehensive scheme of general education. The company maintains primary schools at its principal centres and a secondary school at Ahwaz, where the education given is, in general, free to all suitable boys, whether they be sons of the company's employees or not. There are, in addition, workshop schools or manual training centres, as well as evening classes in particular subjects.

No survey, however brief, of the work of the Anglo-Persian Oil Company would be satisfactory that failed to note how the scientific method permeates and pervades all the operations of the company. Instead of the "wild cat" drilling characteristic of the methods of oil-finding often pursued in other countries, geological survey, geophysical investigation (involving electrical, gravitational, and seismic methods), chemical analysis and research, are enlisted to keep this fundamental problem of finding the oil on a sure scientific basis. Furthermore, the comprehensive scientific data that have been obtained have enabled a far-sighted policy of scientific conservation of the oil reserves to be pursued continuously and systematically. Otherwise, despite the extraordinary richness of the Persian field, exhaustion of an economic, if not of

a material character would have been reached in a comparatively small number of years.

The achievement that has been described in this necessarily short review is the fruit of a remarkable and rare interfusion of business organisation, science, and humanitarianism. The writer is glad of this opportunity to repeat what he has said before: that what the Anglo-Persian Oil Company has done in Persia is one of the finest achievements associated with the British name. In that achievement, Persia has played an important and a growing part, which, it may be hoped and confidently expected, will continue.



THE HEAD OF AN OIL-WELL: ONE THAT IS 2800 FEET DEEP AND PRODUCES OVER A MILLION GALLONS A DAY AT A PRESSURE OF ABOUT 400 LB. PER SQUARE INCH.



THE CIRCUS AT OLYMPIA: A TRIO OF ELEPHANTS ENGAGED IN A PACHYDERMATOUS TEST MATCH—WEARING PADS!

The circus at Olympia will again this year claim its thousands of votaries, both young and old. Its appeal does not diminish with the years; and, although performing skill increases, the type of entertainment holds to tradition. In the photograph are seen the "Cricketing Elephants." An account of them states that they have met every President of the U.S.A. in the last twenty years. Other sensational turns are given by a party of American trapezists, Japanese acrobats, and all the old friends, the performing horses, the lions and tigers, and the seals.



AIR-COMMODORE P. F. M. FELLOWES.

Appointed leader of the expedition to fly over Mount Everest. Has had much experience in the Middle East, particularly of flying in mountainous country, and of pioneer expeditions. Director of Airship Development, 1924-29.



MR. H. SPENCER JONES.

To be Astronomer Royal in succession to Sir Frank Dyson. Now Astronomer at the Cape of Good Hope Observatory. Chief Assistant at the Royal Observatory, Greenwich, 1913. Served in the Inspection Department at Woolwich during the war.



MR. L. R. WAGER

Invited to join the Mount Everest climbing expedition. Was a member of the British Arctic Air Route Expedition, 1930-31. Awarded Polar Medal, with other members of the expedition, last month.



MR. T. BROCKLEBANK.

Invited to join the Mount Everest climbing expedition, which is to leave England early in the New Year under the leadership of Mr. Hugh Rutledge. Rowed stroke for Cambridge, 1929, 1930, 1931.



THE CHRISTMAS LECTURES AT THE ROYAL INSTITUTION: PROFESSOR RANKINE, WHOSE SUBJECT IS "THE ROUND OF THE WATERS."

The Christmas lectures at the Royal Institution are being given this year by Professor Rankine, Professor of Physics in the Imperial College of Science and Technology, on "The Round of the Waters." Professor Rankine is President of the Physical Society. During the war he investigated the possibilities of transmitting speech by light, and invented an instrument for this purpose—the photophone. He is seen here with the "cryophorus"—apparatus used in his lectures.

A WINDOW ON THE WORLD: EVENTS AND PERSONALITIES OF THE WEEK.



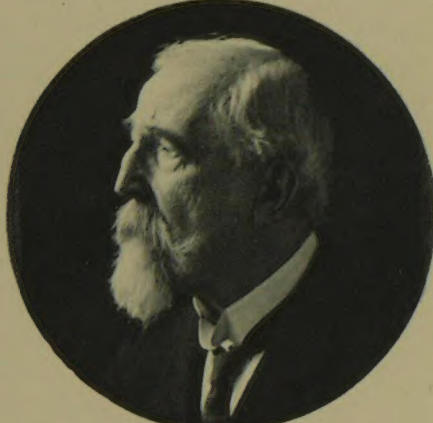
THE FIRST MARINE IGUANAS IN THE "ZOO": THE REPTILES, FROM THE GALAPAGOS; WITH THEIR DONOR, LORD MOYNE (LEFT).

It was announced on December 21 that Lord Moyne had presented some four-foot-long marine iguanas from the Galapagos Islands to the "Zoo." These lizards are unique, as being the only ones that inhabit salt water. They feed exclusively on seaweed. Some of these animals were acquired by the New York "Zoo," but they refused to feed. The London "Zoo" has accordingly ordered a selection of suitable weeds, which are to be sent up fresh from Plymouth. In spite of their formidable appearance, these lizards are harmless—indeed, quite tame.



SIR EDWARD BACON.

Curator of the King's Philatelic Collections. Created Knight Commander of the Royal Victorian Order, December 21. Formerly president of the Royal Philatelic Society. Responsible for the arrangement of the Tapling Stamp Collection in the British Museum.



LORD DILLON.

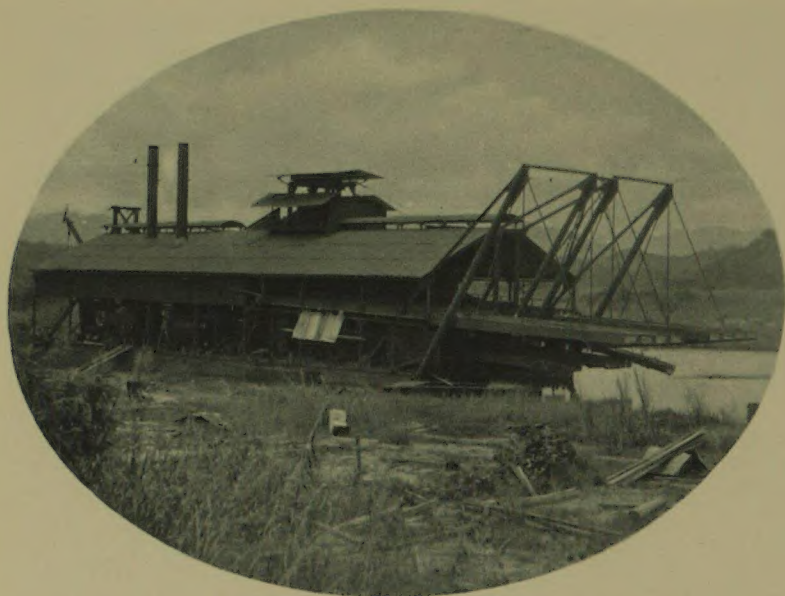
The antiquary and expert on arms and armour. Died December 18; aged eighty-eight. Curator of the Armouries of the Tower of London, 1892-1913. A trustee of the National Portrait Gallery and of the British Museum. President, the Society of Antiquaries, 1897-1904.



MRS. THOMAS BROCKLEBANK, WHO IS TO LEAVE HER COLLECTION OF PORTRAITS OF RULING HOUSES TO THE NATION.

Mrs. Thomas Brocklebank, it is announced, will, by request, leave her collection of portraits of royal personages to the British Museum. The collection includes some 4000 photographs of portraits of various ruling houses—Medici, Sforza of Milan, Este of Ferrara, Gonzaga of Mantua, Hapsburgs, Valois, Bourbon, Plantagenet, Tudor, Stuart, Hanover, and Windsor. The collection fills some fifty-five special volumes.

TOPICAL—AND TROPICAL: HAPPENINGS AT HOME AND ABROAD.



ONE OF MALAYA'S MAIN INDUSTRIES AFFECTED BY WORLD-WIDE TRADE DEPRESSION: A DREDGE FOR THE PRODUCTION OF TIN, NOW OUT OF ACTION.

"The above photographs," writes the sender, "indicate the effect of the world-wide slump in Malaya, whose main products are rubber and tin. One shows a rubber estate where work has ceased: as a result, a coarse destructive grass called 'alang' has spread, and, if not eradicated, will ultimately kill the trees. Marks of the old tapping are visible in scars on the bark. The other photograph shows a dredge out of action owing to tin restriction and unremunerative prices.



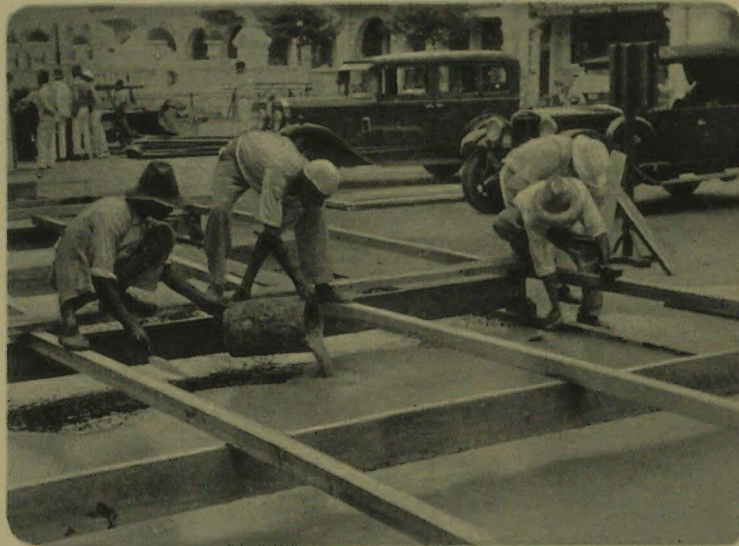
AN EFFECT OF THE SLUMP ON THE RUBBER TRADE: A MALAYAN PLANTATION IDLE AND OVERGROWN WITH DESTRUCTIVE GRASS KNOWN AS "ALANG."

These dredges are brought in pieces to alluvial ground proved by boring to be tin-bearing, and erected on the spot; a hole is dug on dry land, that the dredge may float, and it then eats its way through *terra firma*, extracting tin as it goes by a process of sluicing. Some dredges, of the most modern type, are capable of digging down to a depth of 110 feet or more—a thing undreamed of ten years ago."



HOPE FOR THE RUBBER INDUSTRY: LAYING AN EXPERIMENTAL SECTION OF A NEW RUBBER ROAD-SURFACE, IN RAFFLES PLACE, SINGAPORE.

"The use of rubber in road-making," writes the sender of the above photographs, "will revolutionise the rubber industry. For testing a new rubber road-surface, a strip is being laid down in Raffles Place, Singapore—a busy area which will thoroughly test its qualities. Malaya has much to gain from an extension of the uses of her principal product. This is the type of road on which her hopes have been fixed for years, as the most promising of the 'new uses,'



POURING RUBBER "CARPET" ON TO A ROAD-SURFACE: A CLOSER VIEW OF THE WORK SEEN IN THE ADJOINING ILLUSTRATION.

and the most likely method of reducing those mountainous stocks that must be removed before prosperity returns. What is being done in Raffles Place is that the top dressing has been removed, the bed of the road slightly roughened, and a special rubber adhesive, called Parafix, applied, after which a carpet of rubber is poured on and given a few days to become hard. It requires 100 tons of rubber to cover one mile of road, 40 ft. wide."



SOUTHERN CALIFORNIA IN LONDON! A NEW ATTRACTION AT KEW GARDENS—THE CACTI HOUSE PRESENTED BY MRS. SHERMAN HOYT, OF PASADENA, WITH LIVING SPECIMENS, SHOWN AGAINST A REALISTIC PAINTED BACKGROUND REPRESENTING A CALIFORNIAN DESERT GORGE.

At Kew Gardens there is now to be seen a remarkable panoramic representation of the desert flora of Southern California, comprising living cacti and other succulent plants, shown against a realistic painted scene of the Mohave Desert. The plants were presented by Mrs. A. Sherman Hoyt, of Pasadena, California, after she had exhibited them at Chelsea three years ago. As there was no suitable accommodation at Kew for the exhibit, she offered to build a special house

there. The new building, designed by Mr. J. H. Markham, was opened this year, and provides visitors with a very interesting new attraction. The rocky foreground, with its growing plants, blends so naturally with the painted background that it is difficult to detect any break. The living cacti include a striking specimen of candlewood (*Fouquieria splendens*), with long, slender, prickly branches, some 6 ft. high, that bear bright red flowers at the tips.

IN THE DESERT OF THE "ETERNAL SNOWS":

THE ARCTIC-LIKE AFRICAN SALT WASTES OF SHOTT EL DJERID.

PHOTOGRAPHS BY DR. JOACHIM VON HEIMBURG.



TAKING THE MAIL FROM TOZEUR TO QABES: A SOLITARY HORSEMAN ON THE BARREN EXPANSE OF SALT DESERT THAT LOOKS LIKE POLAR SNOW-WASTES.



WHEEL-TRACKS IN THE SALT, WHICH LIES CRUSTED THICK OVER THE GROUND FOR AS FAR AS THE EYE CAN SEE: PRISONERS ESCORTED ALONG A DESERT ROAD.



IF ONLY IT WERE THE SNOW IT SEEMS TO BE! TRANSPORTING PRISONERS ACROSS THE ENDLESS SALT UNDER A BURNING AFRICAN SUN, HIGH IN THE SKY; WITH A POLE SET UP TO MARK THE ROAD.



THE YIELD OF THE DESERT—AND THE ONLY PRODUCT THAT IT GIVES: SALT COLLECTED AND PILED INTO A GREAT HEAP.



LIKE EXILES IN SIBERIAN SNOWS: PRISONERS CHAINED TOGETHER ON THE MARCH ACROSS THE SALT DESERT.



SALT GLOBULES RESEMBLING LUMPS OF ICE: WHEEL-TRACKS, APPARENTLY FROZEN, IN THE SURFACE OF THE SHOTT EL DJERID.

In Southern Tunisia, on the borders of Algeria, lies the vast and gloomy waste of salt which is called the Shott el Djerid. In winter, the rainy season of this region, the surface is covered with water and the Shott becomes a marsh; but for many months of the year it is a desert of salt, glittering like snow under the sun. The surface is as flat as a table, but the traveller may lose the sense of the horizontal and feel that he is ever going upwards! He is pursued, also, by optical illusions; mirages of palm groves appear on the horizon, but recede as he approaches them and finally disappear. In "Fountains in the Sand," Mr. Norman Douglas describes his first view of the Shott from the oasis of

Tozeur: "To me that line of inky-black palm trees, with its background of blanched sterility melting into a lowering leaden-hued sky, conveyed a most uncanny impression: the prospect was absolutely familiar! Yes, there was no doubt about it: I had seen the place before; not in Africa, of course, but—somewhere else. Where—where? Suddenly I remembered: it was a northern landscape, a well-known forest of sombre firs, rising out of the wintry plain. The white salty expanse, filling up the interstices between the palms, helped to complete the illusion; it was powdered snow among the tree-tops." These photographs are by the German traveller Dr. Joachim von Heimburg.

THE PAST RE-CREATED FOR THE PRESENT: THREE-DIMENSIONAL RECONSTRUCTIONS IN A BUFFALO MUSEUM.



WAX FIGURES REPRESENTING THE ACTIVITIES OF IROQUOIS INDIANS: MEN CONSTRUCTING A DUG-OUT BY BURNING AND CUTTING; WHILE, ON THE LEFT, WOMEN ARE AT WORK IN THE FIELDS, WHERE MAIZE IS THE MAIN CROP CULTIVATED.



A STOCKADED IROQUOIS VILLAGE OF PRE-COLONIAL DAYS: MEN MAKING A HUT (RIGHT) OF STICKS TIED TOGETHER WITH NATIVE THONGS AND ROPE.

WAX FIGURES REPRESENTING THE ACTIVITIES OF IROQUOIS INDIANS: MEN CONSTRUCTING A DUG-OUT BY BURNING AND CUTTING; WHILE, ON THE LEFT, WOMEN ARE AT WORK IN THE FIELDS, WHERE MAIZE IS THE MAIN CROP CULTIVATED.

LIFE PREHISTORIC AND PROTOHISTORIC; MODELLED FOR THE ENLIGHTENMENT OF TWENTIETH-CENTURY MAN.



WOODLAND CRAFT OF THE IROQUOIS: AN INDIAN FELLING A TREE BY BURNING IT AT THE BASE: A HUNTER WITH A WILD TURKEY; AND OTHER INDIANS STRIPPING BARK FROM AN ELM-TREE WITH WHICH TO COVER THEIR HUTS.



THE MAIN PLAZA OF THE MAYA CITY OF TIKAL, WHERE THERE WERE NEARLY A HUNDRED PUBLIC BUILDINGS AND TEMPLES MADE MAINLY OF STUCCO-COVERED LIMESTONE IN A PYRAMIDAL STYLE: A RELIGIOUS CEREMONY IN PROGRESS.

AT the Buffalo Museum of Science, Buffalo, New York, artists and men of science have co-operated in presenting admirable three-dimensional reconstructions of the life of prehistoric man, the Maya, the Red Indian, and so on, and that of certain lower creatures. The figures and their surroundings have been modelled so well, and set against painted backgrounds with such imagination and technical skill, that the groups are of extraordinary vividness, a fact to which our photographs bear witness. The following details may be added, as amplifying those given under the illustrations:—The Iroquois people, who were the natives of greatest political importance in North America during Colonial days, comprised a number of tribes which shared a common culture, were semi-sedentary, and practised the growing of maize. In time of need they palisaded their villages with high stockades. As a figure in one of the groups shows, trees were felled by means of fire, a mass of clay confining the flame where needed. Lengths of bark were stripped from elm-trees to afford covering for the huts.—One of the most interesting of the groups is that which represents the cave life of Cro-Magnon man. This tall, large-skulled, big-brained race, in which the men's and women's cranial capacity exceeded those of average Europeans of to-day, replaced

[Continued opposite.]



LIFE AT THE BOTTOM OF A DEVONIAN SEA, IN WHICH THE FIRST FISH SWAM: A MARINE MODEL QUARRIES OF WESTERN NEW YORK STATE.

WAX FIGURES REPRESENTING THE ACTIVITIES OF IROQUOIS INDIANS: MEN CONSTRUCTING A DUG-OUT BY BURNING AND CUTTING; WHILE, ON THE LEFT, WOMEN ARE AT WORK IN THE FIELDS, WHERE MAIZE IS THE MAIN CROP CULTIVATED.



A GROUP SHOWING BLIND FISH AND BLIND SHELL IN THE SOUTHERN PART OF INDIANA: ETIOLOGICAL

FISH NATIVE OF POOLS IN LIMESTONE CAVES FOUND MONSTERS THAT FEED BY THE SENSE OF TOUCH



A SCENE OF 20,000 YEARS AGO IN WAX, WOOD, PLASTER, AND PAPIER-MÂCHÉ: CRO-MAGNON MAN OF WESTERN EUROPE; WITH AN ARTIST DRAWING ANIMALS ON THE WALL OF THE CAVE, AND A HUNTER RETURNING WITH HIS KILL.

[Continued.] the uncouth Neanderthals in Western Europe twenty thousand or more years ago. The unequalled size of their brains, the various negroid characteristics which are apparent in their skeletons, and, more than all, the astonishing works of cave art which their culture (the Aurignacian) achieved, combine to render the Cro-Magnons one of the most remarkable peoples of antiquity. It is not known for certain whence they came, nor why, when apparently so highly gifted, they gave way later to smaller and lesser-brained invaders. Many of their wall paintings and drawings are found in the recesses of long caves, where no light can ever have penetrated, and must have been accomplished by the dim glow of smoky torches. Under such conditions the performing of delicate artistic work on almost inaccessible roofs and walls must have been extremely difficult; and their object in selecting such places, where no ornamental purposes are served, remains obscure.—The great Maya city of Tikal, in Southern Mexico, was one of a group of cities which flourished from about 300 to 600 A.D., but it was abandoned in the seventh century, and Chichen-Itzá became the magnificent centre of the Maya Empire.—Late in the Silurian period the first vertebrates (fish) occurred; in the succeeding Devonian they developed into a strange variety of forms.



THE WORLD OF SCIENCE.



BLACK GROUSE.

By W. P. PYCRAFT, F.Z.S., Author of "Camouflage in Nature," "The Courtship of Animals," "Random Gleanings from Nature's Fields," etc.

A DAY or two ago an old friend of mine sent me a brace of black grouse—a most seasonable and most welcome gift. As I contemplated the feast in store for me, I fell, half-consciously at first, into

while southwards it is to be found in the Pyrenees, North Italy, North Caucasus, the Tian Shan Mountains, and Peking. Over the whole of this great range, it is to be noted, the bird retains

all its essential characters in their entirety. But certain trivial differences have been detected by ornithologists, sufficiently marked and constant, they contend, to justify the recognition of four "sub-species."

The first of these seems hard to justify. This is the North-European bird, called *Lyrurus tetrrix*, to distinguish it from our bird, *Lyrurus*

tetrrix britannicus, solely on the ground that the female has paler grey, and broader tips to the wing-

the "typical" black grouse, and its "sub-species," with the Caucasian bird, which appears to be confined to the Caucasian Mountains. Why has this bird so limited a range? Why do we not find here also at least some tendency to "break up" into sub-species? Perchance, further study will show that the food of this Caucasian species differs in some material way from that of the typical black grouse.

There is a tendency on the part of some of us to resent what we call the "hair-splitting" of the systematists. When we have all our lives believed that "our" black grouse was to be found over enormous areas of Europe and Asia, it is disconcerting to be told that the black grouse of Europe is *not* the same as our bird. It does not even console us to be told that "our" bird is "ear-marked" British, and is found nowhere else. But when we agree to suppress this bias against the systematist, we find the ground cleared for an enlargement of vision. For the "sub-species" referred back to us for further examination do indeed give occasion for much thinking; for here we have the material of which new species are made. And the process is hastened by breaks in the chain of these intermediate forms, which, from one cause or another, from time to time take place.

Why is it that the grouse tribe all have feathered legs? In the red grouse and ptarmigan this feathering is very dense, and extends to include the toes. In the ptarmigan, at any rate, it is governed by climatic conditions, since it is very dense in winter and sparse in summer. But there is another peculiarity about these toes, for in the capercaillie and the black grouse, the inner side of each toe bears a row of small projecting scales, forming a comb-like structure, whose function has yet to be discovered.

A characteristic feature of the game birds is the presence of bare skin, above or around the eye, commonly of a bright red colour. In the pheasant it spreads over the whole face, and is covered with tiny papillæ. In the grouse tribe this bare skin takes the form of a leaf-like, upstanding membrane, larger during the breeding season than at any other time. It is larger in the caper than in the black grouse, and larger still, relatively, in the red grouse. Like so many other features derived from a common source, it shows interesting differences in its range of size and area in different species.

If the haunts and habits of the caper and black grouse—British and Continental—were minutely studied and compared, we might find a clue to this matter of the causes of the development of the various "sub-species" of these birds. On the other hand, these may be due rather to much more delicate and intangible differences in the qualities of the pigment-secreting tissues, as well as of the agencies which govern size. In any case, it is clear that we have by no means discovered all that there is to learn about the black grouse. I may presently find that the cook has revealed new qualities!



1. THE FOOT OF THE BLACK GROUSE: A BIRD WHICH, LIKE THE CAPER, IS FEATHERED TO THE BASE OF ITS TOES.

In the ptarmigan the toes are also closely covered. On the inside of each of the black grouse's toes can be seen a comb-like series of scales. The function of these is at present unknown.

another train of thought which afforded me, on the spot, a feast for the mind! I passed from the to the ornithologist, and then to the "Evolutionist"—two aspects of the same theme which should really be regarded as inseparable. For when one has, for the hundredth time perhaps, dwelt for a while on the plumage and other external characters, one should always ask what is the interpretation thereof, and what variants they show? This attitude is surely praiseworthy! For I was not "looking a gift-horse in the mouth," but rather deriving even more pleasure from my gift, by enlarging my enjoyment of it.

Everyone knows the blackcock at sight, alive or dead. But by no means everyone develops any sense of "awareness" that the very tokens by which they recognise the bird are just those which most particularly demand concentrated attention. For these same tokens enable us to distinguish it, more or less completely, from all its near relations. They are, in short, what we call "specific characters." Just exactly why and how they have attained to what we may call "individuality" has so far eluded us. And they are the more puzzling because they may differ, and that in no uncertain manner, in the two sexes and at different times of the year, and differ again in the fledgling and later sub-adult plumage.

The force of these observations will become more apparent if we compare our black grouse with its Caucasian relative (*Lyrurus mlkosiewiczzi*). This is a slightly smaller species than our bird, but it differs conspicuously in its coloration, in so far as the male is concerned, in being entirely black. That is to say, it lacks the white blaze in the wing, and the white under tail-coverts which form such a conspicuous feature in our bird during the "courtship" dances, when they display a billowy mass of white to the fullest advantage. For the lyrate tail is then spread to its widest extent, and drawn forwards over the back, while the coverts are set on end.

It has always been supposed that these white tail-feathers had an important rôle to play at such times. And it may be so. But evidently we have here a point to be cleared up. We want to know, in short, whether the Caucasian bird makes a similar display, and uses its tail after the same fashion. In which case, it would seem, we have over-estimated the importance of these white tail-feathers, since this Caucasian bird has no such ornament. But, furthermore, be it noted, its tail-feathers are only slightly curved, a sort of feeble imitation of our bird.

Another important point which presents itself is the geographical distribution of these two birds. Our black grouse ranges over the greater part of Europe and Northern and Central Asia. In the west it extends from North-East Siberia to Great Britain,



2. THE LYRE-SHAPED TAIL OF THE BLACK GROUSE SEEN FROM THE UNDER-SIDE: A PHOTOGRAPH SHOWING THE UNDER TAIL-COVERTS, WHICH, DURING THE BIRD'S REMARKABLE COURTSHIP DISPLAY, ARE RAISED UP TO FORM A MASS OF BILLOWY WHITE—CONTRASTING CONSPICUOUSLY WITH THE BLACK PLUMAGE.

In the Caucasian black grouse, which is discussed in the article on this page, the tail-coverts are black, and the feathers are only slightly curved.

coverts and under-parts, and is blacker on the belly. The males are indistinguishable.

The Siberian black grouse (*Viridanus*) shows rather more white in the wing and the feathers of the leg, while the female has white tips to the body feathers. The Mongolian sub-species is barely distinguishable from the Siberian bird, while the Manchurian bird (*Ussuriensis*) is to be distinguished only in having exchanged the purplish blue of our bird for a greenish blue, while the wing-feathers agree with those of the West Siberian black game. Are these differences—and they are very slight—to be set down to differences of climate, food, or soil? Here we seem to have "incipient" species in the making.

This matter becomes the more interesting when we come to compare what we may call



3. THE SUPRA-ORBITAL WATTLE OF THE BLACK GROUSE: A CRESCENTIC PATCH OF SKIN OF A VIVID RED; ITS SURFACE STUDDED WITH SMALL, NIPPLE-LIKE OUTGROWTHS RECALLING THOSE ON THE FACE-WATTLE OF THE PHEASANT.

ZINC AND OSIER RAFTS TO KEEP THE NORTH SEA OUT OF HOLLAND.



A DIFFICULTY AT THE GIGANTIC SLUICE GATES AT DEN OEVER, THE NORTH HOLLAND, OR WESTERN, TERMINUS OF THE 18½-MILE DYKE WHICH HAS CONVERTED THE ZUIDER ZEE INTO A LAKE AND IS EXPECTED ULTIMATELY TO GIVE HOLLAND OVER 500,000 MORE ACRES OF ARABLE LAND: A HUGE RAFT, MADE OF A ZINC FRAMEWORK COVERED WITH MATS OF OSIER STICKS, BEING WEIGHTED WITH BASALT BEFORE BEING SUNK TO COUNTERACT UNSUSPECTED SEA CURRENTS.



THE METHOD USED TO COUNTERACT THE SEA CURRENTS WHICH TEND TO UNDERMINE THE MAIN DYKE IN THE NEIGHBOURHOOD OF THE DEN OEVER SLUICE GATES: A VAST ZINC RAFT COVERED WITH OSIER MATS BEING TOWED TO THE POSITION WHERE IT WILL BE WEIGHTED WITH BASALT AND SUNK.

The reclamation of the Zuider Zee, perhaps the greatest engineering undertaking of modern times, has on many occasions been illustrated in these pages; and the closing of the last gap in the 18½-mile dyke between North Holland and Friesland was recorded on June 4. That accomplishment transformed the old Zuider Zee into Yssel Lake; but even after that all-important stage in the work, innumerable problems still remain to be solved before Holland can reap the benefit of the vast expenditure incurred. An unsuspected difficulty has arisen in recent months at the Den Oever sluice gates—the North Holland terminus of the dyke.

It has been found that the current caused when the sluice gates are opened sets up a scouring action which tends to erode the bed on which the groundwork of the dyke is built and so undermine the dyke itself. To counteract this effect, it has been found necessary to adopt the measures shown on this page. The use of similar rafts, or fascine mattresses, is a well-known expedient in the protection of sea defences, and, as illustrated in our issue of May 14, one that the Dutch engineers have already exploited in strengthening under-water parts of the great dyke. Across it are laid two-way traffic roads and railway tracks.

THE MYSTERY OF THE ORIGIN OF THE LURISTAN BRONZES:



ONE OF THE LOOTED CEMETERIES IN THE ITTIVID COUNTRY: THE OPEN GRAVES VISIBLE AS A DARK PATCH ACROSS THE VALLEY, ON THE BANKS OF THE KANGAVARI RIVER, A TRIBUTARY OF THE GIZARD.

1. In the following article Miss Freya Stark gives some particulars of her recent journey in the bandit-ridden regions of Western Persia, whence came the now famous Luristan bronzes. Their origin is still a mystery. Writing in the "Geographical Journal" for December, Miss Stark says, in reference to the great variety of objects found, that "the civilisation of the Luristan Bronzes appears to cover a great many different times and fashions." In connection with her photographs given here she writes: "Two interesting articles by Mr. Upham Pope, in 'The Illustrated London News' of October 22 and 29, deal with the bronzes of Luristan and the history of their discovery in that little-

(Continued on 2.)



HOW THE LURISTAN BRONZES WERE DISCOVERED: NURALI TRIBESMEN DIGGING FOR GRAVES WITH LONG IRON SKEWERS—POSITIONS OF STONES UNDERGROUND INDICATING WHETHER THERE IS LIKELY TO BE A GRAVE OR NOT.



FEMINE FASHIONS IN LURISTAN: LUR WOMEN FROM TARHAN IN THEIR LARGE TURBANS (ONLY ABOUT HALF THE SIZE, HOWEVER, OF THOSE WORN BY WIVES OF CHIEFTAINS).

2. known and still dangerous country. With the exception of Chaleh and Tamar, I have visited all the places mentioned by Mr. Pope (whose spelling of the names I venture to alter), and have returned only a few weeks ago from the Pusht-i-Kuh, where many yet unexplored graveyards await the visiting archaeologist. Readers may be interested to see some photographs of the country and of the people. The whole region is cut up into a series of long parallel ranges running roughly N.W. and S.E., and opening into hill-encircled plains upon whose gentle

(Continued on 3.)



A BRIDE AGED ONLY FOURTEEN: A INHABITED BY WARLIKE TRIBES, PERSIAN AUTHORITIES CONSIDER TO



A BRONZE STAND, PERHAPS FOR AN IDOL, WITH REPRESENTATIONS OF POMEGRANATE FLOWERS: AN INTERESTING EXAMPLE OF LURISTAN ART FROM PUSHT-I-KUH.

3. undulations cemeteries containing bronzes are to be found. Mr. Pope's informant was misled by the tribesmen when they told him that the graves are almost always under chinar (plane) trees: this tree is practically unknown in the places mentioned, and the graves are as often as not in open country, but nearly always near water. It would seem, indeed, that the course of the rivers—the Saldmarsh River especially, which with its tributaries drains the whole of this region—must first have led the

(Continued on 4.)



THE TENTS OF TUDARU, NORTH OF THE GIZARDU, THE MOST SOUTHERLY POLICE POST IN THE REGION: TYPICAL LURISTAN LANDSCAPE OF BARE HILLS IN "A LITTLE TONGUE OF KAKAVEND INSERTING ITSELF INTO THE ITTIVID COUNTRY."

a fringe of old villages still exists. The places that Mr. Pope heard of—Siojab, Giza Rud, the Kakavend, and even the north of the Ittivid country—are only on the border of comparative safety or just beyond it. But the cemeteries continue to extend southward, and the best of the bronzes, as far as I could hear, come from the district of Tarhan and Kuh-i-Dasht, whose plains run down to the Saldmarsh. I have tried twice to penetrate into this country, once from the north through the Ittivid, and once from the west through Pusht-i-Kuh, and have looked over it from a high hill on the Saldmarsh banks, and seen its desolate, rust-coloured ranges and far empty spaces. Unfortunately, the Persian authorities consider it unsuitable country for travellers, and interfered with my arrangements on both occasions, though in a most courteous and friendly way. I saw enough, however, to convince me that it is a region well worth the attention of archaeologists, and that, however much has already been carried away and destroyed, there are plenty of sites still left. There are many layers of civilisation. The country, where now not a house is to be seen, is sprinkled with ruins of Islamic cities, above or beside those more ancient ruins that lie below the ground. Interesting early

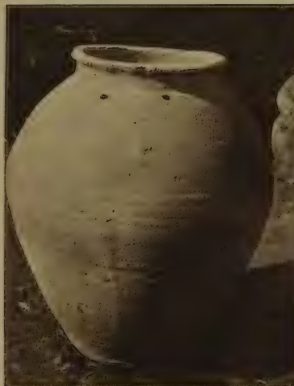
DANGEROUS TRAVEL IN A LAND OF UNIDENTIFIED ART.

4. people of the bronzes up into the fertile heart of the mountains, for they appear never to have travelled very far from the waterways. In the higher ground, in the ravines and on the oak-shadowed hillides, poorer graves are found, containing only flints and shards of the most primitive pottery, possibly belonging to a more primitive and indigenous race. There are two little tribes in the Pusht-i-Kuh, called the Larti and the Hindimini, whose numbers have now dwindled to a few tents. These are locally considered to be the first inhabitants of the country, to which the former tribe is supposed to

(Continued on 5.)



IN THE NOMAD COUNTRY OF LURISTAN: A VALLEY IN DILVAN WHERE MANY CEMETERIES HAVE BEEN DISCOVERED—A VIEW INCLUDING ONE GRAVEYARD JUST TO THE LEFT OF A PATCH OF PLOUGHED LAND.



A FORM OF URN-BURIAL FOUND IN A GRAVE AT TARAZAN, IN THE KAKAVEND COUNTRY: A JAR WHICH CONTAINED A SKELETON AND HAD A SMALLER JAR OF GREEN GLAZE COVERING ITS MOUTH.

5. have given its name (Lar = Lar). Whose present by new invaders, it is stated, they fled up into the last reaches of Kobar Kuh, the highest range of the land, where in two deep ravines, overshadowed by the great mountain wall, I visited them. They are pleasant and friendly people, and very poor. Their greatest wealth, perhaps, is in the oak woods which surround them: the green boughs feed their flocks, the dry boughs roof their tents and provide fuel, and the acorns are made

(Continued on 6.)



FUTURE TRIBESMEN OF LURISTAN: LITTLE BOYS OF THE NOMAD COUNTRY, WHERE THE PERSIAN AUTHORITIES SEEK TO INCULCATE SETTLED WAYS OF LIFE BY GETTING CHILDREN SENT TO SCHOOLS IN BORDER TOWNS.



THE REGION RICHEST IN OLD CEMETERIES, BUT INHABITED BY TRIBES OF UNCERTAIN REPUTATION NOT YET UNDER POLICE CONTROL: PART OF THE ITTIVID COUNTRY, WITH THE RIVER GIZARDU AND A TRACK (ON LEFT) LEADING TO THE SALTDMARSH RIVER.

Islamic tombs are found at Alishahr. Greek Seleucian coins are picked up in Tarhan and Pusht-i-Kuh. I think it will be found that, until the barbarism of comparatively recent times, a constant stream of intercourse and commerce followed the river and crossed the western passes. The movements of the tribes are worth careful study, for they have probably an ancient history: and their language, too, may throw interesting light on their past: the word 'Kuch', for instance, which they use to express their 'flitting' from summer to winter pasture, is used in the same sense by the Russian Mongols of the Steppes, and might conceivably throw some light on the original home of the Lurs. I returned from Luristan to Iraq by one of the ancient routes—a four days' ride—escorted by a rather excessive guard of four policemen anxious to see me safe over the border. As I went along the tribesmen showed me, and I saw for myself, mounds and cemeteries at intervals beside the way. There are only four main routes from Iraq into Luristan—ways settled ages ago by the configuration of the land and unaltered since the earliest times. A season spent in a systematic study of these routes and of the graveyards that lie along them might well repay the investigator."



A COSTUME NOW FORBIDDEN BY THE PERSIAN GOVERNMENT, WHICH REQUIRES THE LUR NATIONAL DRESS TO BE REPLACED BY THE NEW FAWLARI HAT AND EUROPEAN COAT: A TRIBESMAN OF LURISTAN.

AN HOTEL FOR CHILDREN ONLY: THE LATEST SOLUTION OF A PARENTAL PROBLEM DURING A REMOVAL OR ON OTHER OCCASIONS.

Continued.]

or more nights in cases of emergency. A number of rooms at the spacious 'Klubhaus am Knie' have therefore been adapted for that purpose, so that Berlin parents who are moving, or wish to take a vacation without their children, or must for some other reason entrust them to the care of others, can now leave them in this children's hotel. Parents visiting Berlin can also entrust their children to the hotel, and can have them brought from the railway station or from any hotel to this novel institution, which is managed by an association headed by Anna von Gierke, the well-known children's welfare worker. The charge per child is only three to five marks per day."

A BED-ROOM IN THE NEW HOTEL FOR CHILDREN ESTABLISHED IN BERLIN: ONE OF THE YOUNG VISITORS WITH A NURSE IN CHARGE; AND COTS WITH SAFETY RAILS.

CIRCUMSTANCES often arise in which parents find it necessary to part company with their children for a time, and, unless there are relatives available, it is sometimes very difficult to make suitable arrangements. These photographs illustrate a novel solution of the problem. A note accompanying them states: "The first 'children's hotel' in Germany has been established at No. 27 in the Berlinerstrasse in Charlottenburg, near the Tiergarten. A kindergarten already existed in the house, but it was desired to make it possible for parents to leave their children there for one

[Continued above.]



REFRESHMENT AND OCCUPATION FOR YOUNG GUESTS AT THE CHILDREN'S HOTEL IN BERLIN: LITTLE GERMAN BOYS AND GIRLS AT A MEAL AND PLAY IN THE KINDERGARTEN ROOM.

(ON THE LEFT) THE "KLUBHAUS AM KNIE," IN THE BERLINERSTRASSE, CHARLOTTENBURG, WHERE A SUITE OF ROOMS HAS BEEN ADAPTED AS A CHILDREN'S HOTEL—THE FIRST EVER ESTABLISHED IN GERMANY.



A "PUNCH AND JUDY" SHOW WITH ITS AUDIENCE OF LITTLE GERMANS: A POPULAR ENTERTAINMENT IN THE CHILDREN'S HOTEL LATELY OPENED IN BERLIN.

OUR WONDERFUL WORLD: A PAGE OF CURIOSITIES.

THE ODD SIDE OF THINGS AT HOME AND ABROAD.



TROUT-FISHING FROM A DIRIGIBLE FLOATING CHAIR: AN INGENIOUS DEVICE ON A SHETLAND LOCH, WHERE BOATS ARE NOT AVAILABLE.

This fisherman has overcome the difficulty of obtaining a boat to fish from by constructing a floating chair, which is just as convenient. Although it is quite stable, it is extremely light, being made of aluminium. In addition to providing the fisherman with a comfortable seat as he drifts over the fishing stretches, it can be easily propelled to any desired spot by means of a small pair of oars hung one on each side.



A TALKING SCARECROW ON AN OREGON FARM: A BEARDED DUMMY WITH A LOUDSPEAKER.

A new way of utilising modern scientific inventions for agricultural purposes has been discovered by a farmer of Oregon, U.S.A., who installed a loud-speaker under his scarecrow's coat and connected it with the wireless apparatus in the farmhouse. The crooning effects of the broadcasters, we are told, were particularly effective in keeping birds off the plants.



LIFE-SIZE DOLLS FOR TRAINING GERMAN NURSES: INSTRUCTION IN DRESSING AND BATHING BABIES AT A VOCATION SCHOOL IN BERLIN.

The thoroughness with which appropriate training is given in Germany to those at the outset of their career is by no means limited to male vocations. In this photograph may be seen future nurses receiving instruction in looking after babies, dolls of life-size and life-weight being used for these experimental purposes. The art of dealing with the unexpected, and often "difficult," behaviour of babies cannot, of course, be properly learnt anywhere except on the living model.



A GERMAN SUBMARINE RECONSTRUCTED FOR AN AMATEUR FILM IN NORTH-UMBERLAND: EXAMINING THE "WRECKAGE" AFTER FILMING SCENES IN WHICH IT WAS SUBMERGED BY THE TIDE.

Howick Bay, on the Northumberland coast, was, as our correspondent informs us, the scene of the making of an amateur naval film called "North Sea." Our photographs show the



A GERMAN SUBMARINE IN AN AMATEUR FILM: THE HEROINE OF THE NAVAL FILM, "NORTH SEA," IN THE CONNING-TOWER OF THE SUBMARINE "U5," RECONSTRUCTED TO LOOK LIKE A WRECK WASHED ASHORE.

wreckage of the "German submarine" "U5," which is used in scenes where it is submerged by the tide. We have not been informed concerning other details of the plot.



A REMARKABLE ALTAR IN AN ANGLICAN CHURCH; THE BACK HAVING A PLATE GLASS WINDOW LOOKING OUT OVER WONDERFUL SCENERY.

This altar was recently erected in an Anglican church at Waiho Gorge, South Westland, New Zealand. Instead of being curtained, it looks out towards the famous Franz Josef Glacier, three miles distant, with mountains rising to heights of over 7000 feet above it.



A STRANGE CHURCHYARD—FOR PET BIRDS—AT BEELITZ, NEAR BERLIN: THE BURIAL OF A CANARY.

Those who mourn deeply at the death of their pet birds can find some outlet for their grief at Beelitz, for they can bury the canary in a special birds' cemetery and feel, no doubt, that the singer is at rest. German sentimentality extends even to flowers and epitaphs.

Our Wonderful World.

"The Demon's Cave"

Staged by

Dame Nature:

A Scene more
Fantastic than any
in a Pantomime.

ASSUREDLY no scenic artist, devising the Cave of the Demon King for a Christmas pantomime, ever achieved anything so bizarre and grotesque as this scene, produced by Nature, among the barren rocks of a Pacific Isle. Here, it might be thought, are those loathly creatures—the dragons—that form the retinue of his Demoniac Majesty, who himself lurks unseen, a shape more awful still, presently to emerge from the darkness of his subterranean lair. Such are the thoughts which our illustration suggests at the present season. Turning now to the scientific side of the subject, we may recall that four large marine iguanas from the Galapagos Islands have been presented to the "Zoo" by Lord Moyne, and were recently placed in the Reptile House. The largest is about a yard long, including the tail, which is comparatively short. The photograph here reproduced was itself taken in the Galapagos archipelago, lying out in the Pacific some 730 miles west of Ecuador. It shows a group of iguanas—huge lizards about four feet long, which swarm in those islands, sunning themselves in their native haunts. A very interesting account of those which live among the rocks and boulders of the shore is given by Dr. William Beebe, the famous American zoologist-explorer, in his book, "Galapagos: World's End." Here we read: "The daily round of life of the sea iguana was very simple. They spent the night in their burrows in the earth, or deep down in lava crevices. About eight or nine o'clock in the morning, if the sun was shining, they came out and waited for low tide; then, making their way slowly to the edge of the surf, they fed on the short, glutinous algae. Afterwards they sometimes basked all day in the sun on some favourite rock out of reach of the water, individuals going back day after day to the same spot." Describing an incident that occurred one day when he was lying on the sand watching the sea pounding the lava boulders, Dr. Beebe continues: "Over the jagged, tortured summits there climbed the largest iguana I saw on the islands. It was a full four feet in length—appearing forty to my lowly view-point. His head was clad in rugged scales, black and charred, looking like the clinker piles of the island; along his back extended a line of long spines, as if to skin of lava he had added a semblance of cactus. He saw me and stopped, looking long and earnestly with curiosity, not fear; then, with his smug lizard smile unchanging, he dismissed me with an emotional feat as strange as his appearance: he twice solemnly nodded his whole massive head, he sniffed and sent a thin shower of water vapour into the air through his nostrils, and clambered past me and down towards the water. If only a spurt of flame had followed the smoky puff of vapour, we should have had a real old-fashioned dragon!"



COUSINS OF THE NEW MARINE LIZARDS AT THE "ZOO": GIANT IGUANAS IN THEIR NATIVE HAUNTS IN THE GALAPAGOS.

OUR WONDERFUL WORLD: A PAGE OF CURIOSITIES.



LIFTING AND LOWERING A WEIGHT ATTACHED TO A LEATHER CAP ON THE HEAD:
A STRENUOUS EXERCISE AT THE STATE POLICE SCHOOL AT BRANDENBURG.

There is no country in the world to-day where physical training is taken more seriously than in Germany, as is witnessed by the growing number of semi-military institutions in which German youth is organised. It is common, too, for the ordinary civilian to give special attention to physical culture. It is not surprising, therefore, that particularly strenuous exercises should be employed in the training of policemen; and these photographs from the State police school at



BUILDING STALWART GERMAN POLICEMEN: A PHYSICAL TRAINING EXERCISE USED
AT THE POLICE SCHOOL AT BRANDENBURG—THROWING AND CATCHING WEIGHTS.

Brandenburg show steps that are taken there to develop the abdominal and cervical muscles of guardians of the German law. The lot of a German policeman in these days is unlikely to be a very happy one, and the cultivation of a stalwart body is not of greater importance than a philosophic mind. Besides risks of death or injury in riots, he may always be turned out, with the latest change of Government, to make room for a policeman of different political loyalties.



A REMARKABLE PLACE OF CHRISTIAN WORSHIP IN SOUTH AFRICA: A ZULU CONGREGA-
TIONAL APOSTOLIC CHURCH.

While "hiking" in Natal, our correspondent came across this tumble-down shack, which has a notice saying "Zulu Congregational Apostolic Church." With its jumble of corrugated iron and thatch, it must be unique as a place of Christian worship. Most of the Zulus to-day have embraced one of the various forms of Nonconformist Christianity, and under that influence are losing the warrior qualities that made them a great military force in the days of Chaka.



WEAVERS STRETCHING AND ASSORTING WARPS IN A SUNNY SUBURB OF THE
WALLED TOWN OF CHINGCHOW: AN OLD-FASHIONED INDUSTRY IN MANCHURIA.

The sender of this photograph writes: "Nowadays in Manchuria a weaving-mill worked by electric motors or steam engines is not a rarity. Generally speaking, however, the people of Manchuria are still in a condition prior to the Industrial Revolution, and as to weaving, handicraft is often resorted to in the countryside." Chingchow, where this peaceful scene is set, is not far from Newchwang, where bandits recently carried off two British subjects.



"BEACHCOMBING" IN NEW ZEALAND: A FAMILIAR SHORE SCENE AT WESTPORT—
A BEACHCOMBER WASHING "BLACK SAND" FOR GOLD.

"There has been a great revival," writes our correspondent, "in the search for gold in New Zealand. In beachcombing, a large copper plate is thoroughly cleaned and then covered with mercury. This is then placed in position as shown, and the 'black sand,' which is the gold-bearing sand, is piled up in the box on the right. The beachcomber now washes this sand over the prepared plate, during which time the fine particles of gold are retained to form an amalgam. . . . This is later heated, and the mercury, being volatile, passes off, leaving the gold. The piles of sand on the left have been through the process and their gold extracted."



CONSTRUCTED BY JAVANESE WITHOUT ANY EUROPEAN SUPERVISION: A SUSPENSION
BRIDGE WHICH CONFORMS TO THE PRACTICES OF MODERN ENGINEERING.

The correspondent who sent this interesting photograph describes the bridge as "a unique bamboo suspension bridge situated between Bandjarnegara and Wonosobo, in Central Java. Engineers who have examined the structure, which was built entirely by natives without any European supervision, state that it conforms to all the laws and practices of modern engineering." Bamboo, it may be added, is a very common building material in the island. Even the houses are often made of it—either directly on the ground or raised on piles.

"PORT HELM" BECOMES "STARBOARD HELM": THE NEW STEERING ORDERS.

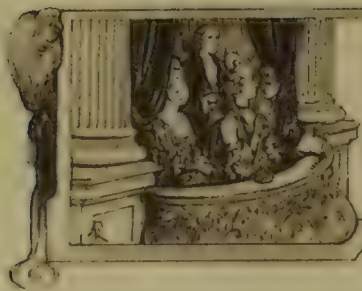
FROM THE DRAWINGS BY C. E. TURNER.



THE IMPORTANCE OF UNIFORM HELM ORDERS — A CASE IN WHICH MISUNDERSTANDING WOULD BE DISASTROUS: A FOREIGN FREIGHTER, WITH A BRITISH PILOT, PASSING A LINER OFF COWES; AND (BELOW) SKETCHES SIMPLIFYING THE EXPLANATION.

As mentioned in our issue of September 24, a revolutionary change is due to take place in the seafaring world of Britain on January 1, 1933. The new steering orders are to come into force on that date, both in the Royal Navy and in the Mercantile Marine; and, though they may at first, perhaps, cause some confusion among "old timers," the change is essentially a sound one, since it is a big step in the direction of international uniformity. The order "Port" will in future mean that the wheel, rudder, and ship's head will turn to port, and the reverse when the order "Starboard" is given. The old orders "Helm a-port" and "Helm a-starboard" meant exactly the opposite of this, since they have survived from times prior to the introduction of the

wheel, when the use of the tiller was universal. In the case of tiller-steered boats the new orders may appear somewhat contradictory, since at the order "Port" the tiller must be turned to starboard; but tillers nowadays are practically confined to small boats in which the helmsman is usually in complete charge, so that no steering orders are needed. The importance of the world-wide adoption of uniform orders is graphically shown in this picture. It illustrates the very frequent case of a foreign freighter with a British pilot meeting a large liner in the narrow Brambles Channel, the highway for all steamers into Southampton. If orders were misunderstood and the freighter altered her course to port in this position, there would be immediate disaster.



The World of the Kinema.

By MICHAEL ORME.



A FAIRBANKSIAN CRUSOE.—THE "EXTRA'S" WORK.

"MR. ROBINSON CRUSOE."

MR. DOUGLAS FAIRBANKS is the Peter Pan of the kinema. A Peter Pan with a wise head on his stalwart shoulders, but the heart, the physique, the zest and vitality of a stripling, for all that. His wise head has



"MR. ROBINSON CRUSOE" SHORTLY TO HAVE ITS PREMIÈRE AT THE PLAZA: DOUGLAS FAIRBANKS MAROONED ON AN UNINHABITED ISLAND.

prompted him to eschew the ordinary romantic hero-parts whilst we are still able to protest against this tacit recognition of advancing years. But we insist on taking his recent announcement of an imminent withdrawal from the serious business of film-making as a sheer piece of bluff. His last two films, so he says, were made for his own pleasure. Well and good. If he will go on making such films as his recent travelogue and his "Mr. Robinson Crusoe" just for fun, his public will be well content. It will never do for a personality so exhilaratingly breezy to be permanently absent from the screen. If I needed a tonic, I would choose a dose of Fairbanksian *joie de vivre*. His latest piece of work is a paean of life—an argument for the joy of being alive, active, athletic, glowing with health from top to toe, flung into the teeth of general depression. He has chosen an excellent vehicle for his purpose. On the way to Sumatra in search of big game, he spies an uninhabited island which kindles his imagination. A return to the primitive? How refreshing! His friends lay a wager that the thing cannot be done, even for a couple of months. Mr. Fairbanks, determined to go one better than our old friend Defoe, calmly "steps off" into the sea armed with a toothbrush. His dog jumps after him. A canine supporter not being in the bargain, the toothbrush is confiscated in exchange for the dog. And so to work in a tropical paradise where abundant material awaits the inventive mind, the cheerful energy and the convenient camera of its first human tenant.

If the original Robinson was a serious individual, soberly exalted over a find of bread-fruit, his disciple is nothing of the sort. The film is an elaborate joke, and a thoroughly entertaining one at that. No jerry-builder could have run up a pent-house in the twinkling of an eye as does Peter Pan Fairbanks. His home on stilts is rich in labour-saving devices. An ingenious system of bamboo pipes carries water from a distant well, where a huge wheel is worked by a tortoise, patiently pursuing a tempting

carrot! Mr. Fairbanks rides through the forest on an overhead pulley car, and announces his arrival with a load of fruit by blowing on a conch-shell, looking the while like the spirit of youth triumphant. When the inevitable Eve appears in the shape of a native girl (charmingly impersonated by Miss Maria Alba) fleeing from impending marriage on an adjacent island, her host initiates her in the game of golf, has cocktails served up by his well-trained and most entertaining monkey, or regales her with music from his home-made wireless. Huge animal-traps and a giant catapult rigged up for fishing purposes play an important part in the final encounter with, and escape from, a swarm of inimical natives, a climax that is worked up to a fine pitch of excitement and a thrilling display of Mr. Fairbanks's athleticism.

Fantastic and rich in the beauty of its South Sea settings, the picture is humorously conceived, full of lively invention, and romps along to the rhythm of its hero's amazing agility. Mr. Fairbanks enjoys himself, enjoys what is practically, *qua* writing, a lengthy monologue, with occasional interruptions to which an engaging parrot contributes an eloquent, if brief, "O.K." Impossible not to accept Mr. Fairbanks as a playmate, to enjoy the jest with him, to join hilariously—yet not without an appreciable measure of excitement—the game of "Follow my Leader," whereby he rescues his friends and himself eludes—with a glorious plunge *via* the catapult into the sea—the infuriated horde of savages. The film, in its spectacle and its fun, is admirably attuned to the holiday spirit of the festive season.

THE LIFE OF AN "EXTRA."

The mentality that finds infinite delight in probing the secrets of the "stars" has been, and always will be—for its curiosity is insatiable—catered for. The gossip columns are regularly and generously fed by publicity, and the "film-fans" may browse at leisure on the intimate details of their favourites' private lives. But the sun of success that irradiates the mountain-peaks leaves the plains in deep shadow. Yet it is here, to my mind, in the obscurity of struggle, of courage and tenacity, that drama lurks. The youthful aspirant for fame on the screen is far too often



DOUGLAS FAIRBANKS MUCH AMUSED AT HIS NEW WEAPON FOR "MR. ROBINSON CRUSOE"—A HOME-MADE IMPLEMENT OF A SHELL TIED TO A BAMBOO.

Douglas Fairbanks's film tells of a man who "maroons" himself on an uninhabited island in the South Seas for a bet. He proves highly successful as "Robinson Crusoe" and captures a head-hunter who has adorned his neck with wireless valves; and with these and other bits of metal, after much ingenuity, he builds a wireless set and gets the voice of a tenor singer! The sound of this lures a beautiful native girl to "Robinson Crusoe's" house. In the end, he is able to claim the payment of his bet, though only after some desperate adventures and hairbreadth escapes from cannibals and head-hunters.

so dazzled by the glitter of the goal that the inevitable hardships of crowd-work are entirely overlooked. I would recommend a heart-to-heart talk with a regular "extra" as a preliminary to a screen career. Not that the novice would encounter grumbles or any kicking against conditions arising out of a peculiar job of work. Rather would he find a cheery philosophy, and an almost heroic patience that quietly accepts disappointment after a "call" has galvanised a roomful of waiting men and women into eager expectancy. But a few hard facts might help a wavering decision, and would certainly give the light-hearted "dabbler" food for thought. Let such a one follow me to 6, Denman Street, where the Film Artists Association nobly carries on the work of the dissolved guild, and where, only yesterday, I sought out an old friend of mine.

Here is now the home of the real "pros"; their home, where they can sit and talk, where the steam from the comforting cup of coffee mingles with the smoke-wreaths of countless cigarettes, and talk of the "trade" goes on at the little tables and the hospitable bar. The room is



"MR. ROBINSON CRUSOE" IN AN UNCOMFORTABLE POSITION: THE LONELY WHITE MAN, CAUGHT BY CANNIBALS, IS ROASTED OVER A SLOW FIRE.

crowded with every type of "extra"—the cameo profile hobnob with the leonine "character-head" and golden youth exchanges *les tuyaux* with dignified age. Meanwhile, the business of the club is to make for friendship between the studios and the Association's members, and to enable that elusive "guinea a day" to go further by finding work for the members without charging them a commission.

A guinea a day! That is the lure—that and the belief that a film-artist requires no experience for crowd-work. I can do no better than to quote the words of my friend for the benefit of the uninitiated.

"If the artist happens to be booked through an agency, bang go two shillings in fees, to be followed by the fare to the studios and possibly (!) a frugal meal, always more expensive 'out' than at home. The life is hard. First there's the elbow-pushing to get the job. Then it is often necessary to 'dress' the part. Clothes have to be hired, sometimes fancy dress, sometimes a 'boiled' shirt and white tie. This done, the call may be held up—for a week or two weeks, or just indefinitely. Then there is the possibility that the scene may be cut out, or the weather prove unsuitable for 'shooting.' However, if all goes well, the ordeal of the day's work starts. Against the initial thrill of the lights, the lamps, the set, and the hope that the first rung of the ladder has been reached, you must count the trials of excessive heat, excessive cold, discomfort, and the fact that 'the crowd' is more or less on a par with the furniture, to be there when needed. 'Breaks' are short and irregular; the average producer has scant time for the human element, the second-in-command even less. One wonders how those who are not compelled to do so go through with it. The hours that are spent waiting about—in 'make-up'—are endless, and the time occupied in queueing up for pay at the end of a day's work almost intolerably long. Still, there are some five thousand extras—all trying to make their way in the film industry, all working hard. Struggling on, doing their bit, pressing forward to get into the 'shot' that will lead to 'continuity' and thus to an extension of their engagement."

Glamour? News for the gossip paragraphs? Nothing of that sort about "the crowd." Just a stern fight for existence and the eternal hope that one day, by great good luck, one of them may emerge from the mass as a separate and intelligent entity.

KABUKI—THE POPULAR THEATRE OF JAPAN: FEUDALISM AND FANTASY.



A JAPANESE KABUKI DRAMA OF THE DAYS OF FEUDALISM: A THRILLING MOMENT IN A PLAY WHOSE CAST INCLUDES THREE "HORSES" PORTRAYED BY ACTORS WHO SPECIALISE IN IMPERSONATING SUCH VELVET-HIDED STEEDS.



"EFFECTS": AN ACTOR-DANCER READING A LETTER—OF ABNORMAL LENGTH IN ORDER TO BE THE MORE IMPRESSIVE—AND SUPPORTED BY ORCHESTRA AND CHORUS, THE LATTER DISCREETLY TURNING THEIR BACKS TO HIM WHILE HE READS.

The reproduction in a former issue of a number of remarkable theatrical prints of individual Japanese actors aroused so much interest that we now present two scenes typical of those known to the Kabuki stage, the popular theatre of Japan. In connection with them, we may note the nature of Kabuki, quoting "Kabuki," a work by Miss Zoë Kincaid. Miss Kincaid was the author of the informative article on Japanese actor-clans published with our previous illustrations. "The four characteristic play-forms of Kabuki," she writes, "may be classified as follows: *sewamono*, plays of everyday life; *jidaimono*, historical drama; *shosagoto*, music-posture drama; and *aragoto*, highly imaginary improvisations. . . . *Sewamono* are plays in which human nature holds sway, the playwright selecting for his

material the joys and sorrows of the people around him." In the *jidaimono*, or historical drama, we learn, "since the playwright was forbidden by the authorities to represent the real events of history, his only recourse was to take famous personages and set them in the midst of a wholly imaginary and irrelevant plot. . . . The *shosagoto* combine all the Kabuki arts—plot, music, scenery, acting, movement, and colour, and represent the most sincere collaboration of the Kabuki specialists. . . . More detached from life is . . . the *aragoto* (literally, rough acting). . . . These pieces . . . are the result of improvisation on the part of various members of the Ichikawa family. . . . The essence of *aragoto* is exaggeration, and this applies to gesture, posture, movement, costume, and acting."

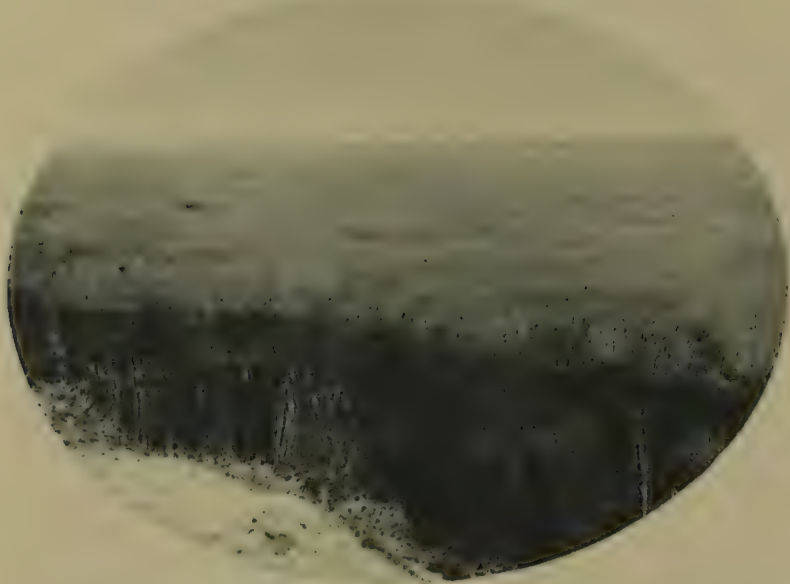
CREATING A NEW ITALIAN PROVINCE FROM THE PONTINE MARSHES.



A TYPICAL SCENE IN THE PONTINE MARSHES AS THEY APPEARED BEFORE THE WORK OF RECLAMATION, WHICH HAS CREATED LITTORIA: A FEVER-STRICKEN FENLAND FOR 2000 YEARS.



NEW ROAD-CONSTRUCTION IN PROGRESS ACROSS THE PONTINE MARSHES: A SECTION FORMING PART OF THE GREAT WORK OF RECLAMATION UNDER THE FASCIST GOVERNMENT.



FOR MANY CENTURIES HITHERTO THE BREEDING-PLACE OF THE MALARIAL MOSQUITO: A VAST EXPANSE OF LONG GRASS CONCEALING SWAMPY WATER IN THE PONTINE MARSHES.



TYPICAL HOUSING CONDITIONS IN THE REGION OF THE PONTINE MARSHES BEFORE THE NEW SYSTEM OF DRAINAGE WAS BEGUN: A FAMILY STANDING OUTSIDE THEIR ROUGH THATCHED HUT.



IN THE PONTINE MARSHES, WHICH THE CÆSARS, THE POPES, AND NAPOLEON ALL VAINLY TRIED TO DRAIN: TYPICAL WATER-LOGGED WOODLAND BEFORE RECLAMATION BEGAN.



A FASCIST LINE OF ADVANCE IN THE RECLAMATION OF THE PONTINE MARSHES: PLOUGHMEN READY TO TILL THE FORMER SWAMP NEAR THE NEW TOWNSHIP OF LITTORIA.

One of the chief works undertaken in the great Fascist scheme of land reclamation known as "Bonifica," conducted during the last ten years in various parts of Italy, has been the drainage of the Pontine Marshes, near Rome, a task that successively baffled the Cæsars, mediæval Popes, and Napoleon. An earthquake in about 300 B.C. is said to have destroyed the natural drainage of this region, and it remained for 2000 years a fever-stricken fenland, with vast swamps forming a breeding-ground for the malarial mosquito. That plague has now been checked. This vast work of reclamation has made remarkable progress, and on December 18

Signor Mussolini officially inaugurated the new Commune of Littoria, which has sprung into being since last April in that district. It has excellent public buildings, and he expressed the hope that similar townships would arise in 1934 and 1935. "To find work for our growing population," he said, "it has hitherto been necessary to cross the Alps or the ocean. But to-day it is here, half-an-hour's journey from Rome, that we have succeeded in conquering a new province. This is but a fraction of the land we are going to reclaim. Internal work will settle the problem of unemployment before long, and Italians will not emigrate

[Continued opposite.

LITTORIA—WHERE ONCE WERE SWAMPS; AND A BORGIA STRONGHOLD.

THE FOUR LOWER PHOTOGRAPHS BY COURTESY OF PRINCE GELASIO CAETANI, FORMERLY ITALIAN AMBASSADOR TO THE UNITED STATES.



THE NEW ITALIAN TOWN OF LITTORIA BUILT IN A RECLAIMED AREA OF THE PONTINE MARSHES, AND RECENTLY INAUGURATED OFFICIALLY BY SIGNOR MUSSOLINI: A GENERAL VIEW INCLUDING (FROM RIGHT TO LEFT) THE POST OFFICE, TOWN HALL, VOLUNTEER MILITIA BARRACKS, AND OPERA HOUSE.



OVERLOOKING THE PONTINE MARSHES, WHERE RECLAMATION HAS WROUGHT WONDERS: THE THIRTEENTH-CENTURY CASTLE OF SERMONETA, ON A HIGH MOUNTAIN SPUR, THE HOME OF THE CAETANI FAMILY FOR NEARLY A THOUSAND YEARS.



A ROMANTIC SCENE IN THE PONTINE MARSHES: LAKE NINFA AND A RUINED TWELFTH-CENTURY TOWER (DESTROYED IN WARS OF 1381) FROM WHICH, LEGEND TELLS, PRINCESS NINFA THREW HERSELF WHEN DISAPPOINTED IN LOVE.



A PICTURESQUE MEDIEVAL STRONGHOLD THAT OVERLOOKS A VAST EXPANSE OF THE PONTINE MARSHES, AS SHOWN ABOVE: THE GREAT ENTRANCE TOWER AT THE CASTLE OF SERMONETA.

Continued.

any more." Throughout Italy, it is reported, some £45,000,000 has been spent on such work in the last decade, 55,000 workmen are employed, and over 17,000,000 acres are being rendered fit for cultivation. In Rome the results of "Bonifica" so far achieved are represented at an exhibition in the Borghese Gardens. Plans for the future are stated to provide for further land reclamation at an estimated cost of £153,000,000. Regarding the Castle of Sermoneta, Prince Gelasio Caetani writes (in the "National Geographic Magazine," of Washington): "Our family, as lords of Sermoneta, quarrelled with the neighbouring community



INSIDE THE CASTLE OF SERMONETA, NEAR THE PONTINE MARSHES: A HALL IN THE HISTORIC BUILDING GIVEN BY POPE ALEXANDER VI. (1492-1503) TO HIS DAUGHTER, LUCREZIA BORCIA.

of Sezze, and hence resulted the longest law-suit known, I believe, in the records of Italy. It began about 1230 and ended about 1790. . . . Pope Alexander VI. confiscated the Castle and gave it to his daughter, Lucrezia Borgia. Caesar Borgia took it from his sister. The ruins of Ninfa date from the twelfth and thirteenth centuries. Legend tells of a beautiful Princess Ninfa, wooed by two princes and promised by her father to the one who could first drain the water from his land. The one she loved was worsted by magic, and she cast herself from the tower battlements into the lake, which her spirit haunts."

"FACES" FROM IRAQ: CLOSE-UPS FROM BOWSER TO



"FULL-FACE PORTRAIT OF A COMÉDIENNE AND ACROBAT; AN EXPERT IN THE DISAPPEARING ACT": A STRIPED STALKING SPIDER (ONE OF THE *LALICIDAE*).



"EYES AT THE BACK OF HIS HEAD": AN IMPRESSION OF "SEE-ALL BOWSER, THE EIGHT-EYED WONDER"; A BIG GROUND SPIDER WHOSE SPRING WAS SWIFTESS ITSELF.

THE British officer who sends us from Iraq these photographs of his "friends," describing the striped stalking spider, writes: "The lady who posed for her photograph lived for some time in one of the cages that accommodated my guests from time to time. . . . She had the most engaging way of climbing to the top of her cage and scurrying along the edge. Then, if any movement was made near her, she just jumped off into complete invisibility. A few moments afterwards you would see her strolling in an unconcerned manner in another part of the cage, having apparently materialised out of space." "Bowser" was the name given to the big ground spider seen in the second illustration. His spring was swiftness itself. In a description of the Puss Moth (descendant of those grotesque caterpillars beloved of schoolboys), we are told that "practically all moths and butterflies have coiled spiral tongues. . . . But the Puss Moth is



"LIKE THE GHOST OF A LEADING LADY PLAUNTING ALL HER OSTRICH FEATHERS": THE BEAUTIFUL "SWAN" OF A PUSS MOTH THAT COMES FROM AN "UGLY DUCKLING" CATERPILLAR.



A VERY POWERFUL SPORTING FIGHTER—WITH A PAIR OF "WIRE-CUTTERS" INSTEAD OF A FACE: PROFILE OF A JERRYMANDER, AN INSECT OF IRAQ (*GAERODES* SP.); SHOWING HIS UNPLEASANT JAWS.



"GOAT-FACE": THE LOCUST, SO NICKNAMED FROM THE VERTICAL STRIPES ON ITS CLUSTERS OF EYES: AN INSECT WITH SOMETHING OF THE HARD, LINED EXPRESSION OF A DEEP THINKER!

too much of a fairy for that. . . . It is unlikely that he could drink with so unpractical a mouth, which consists of two furry little toothless jaws, and

two tiny little whiskers, and what may be a small mouth opening." The Jerrymander has no face at all. "If you look . . . you will see, where an ordinary creature would have a face of sorts, a view of the double wire-cutters, as in his portrait. . . ." Locusts "have excellent sight, three large simple eyes, and two clusters of smaller ones, that have a peculiar striped effect, giving a goat-like expression." The Scarab beetle is a champion weight-shifter. This he does by entangling his legs on either side of his chosen piece of fifth and starting off backwards, rolling his load.

OF AN OFFICER'S FRIENDS—HORTENSE AND JANE.



A CHARMING LITTLE ROCOCO SPADE FOR A CHAMPION INSECT WEIGHT-SHIFTER: THE SCALLOPED SHOVEL WHICH THE SCARAB BEETLE CARRIES ON ITS HEAD AND USES WITH A WILL.



"A WORLD-FAMOUS TRAPEZIST, FEATURING HER FAMOUS DEATH-DEFYING DIVE": FULL-FACE PORTRAIT OF JANE, A JUMPING SPIDER (ONE OF THE *LALICIDAE*), WITH EYES LIKE HEADLIGHTS AND SIDELIGHTS, AND A BEARD.



"THE FOOLISH, BRUTAL EXPRESSION OF THE LOCUST-KILLER, WHOSE ONLY OBJECT IS FOOD": HORTENSE; A LUMBERING, SLOW-MOVING CLOWN OF AN INSECT WHO TOOK LIFE AS SHE FOUND IT.

by the name of "Hortense") has no wings. He has sacrificed them for size, weight, and muscle. His legs are armed with very strong, sharp spines in a



THE INDESCRIBABLE: FACE AND EYES OF THE CORNER CREEPER (*PARFUS* SP.), A POOR "WISHY-WASHY BONELESS FISH" OF A SPIDER.



"DANCE, AND HOW!"—PORTRAIT OF A PEARL-EYED SPIDER, WITH PRACTICALLY NO BODY, A LEG-SPREAD OF THREE INCHES, AND A RING OF EYES.

double row on their opposing surfaces, from which there is little chance of escape." The description of the corner creeper runs: "One or two spiders are poor wishy-washy boneless fish. The corner creeper is one. He cannot spin a web alone, but has to get several feeble friends to help. Sometimes there are as many as four in a common web, in which they slouch fearfully about." In the pearl-eyed spider the eyes look rather like a string of pearls: hence the name. "He was the fastest thing I have ever seen in spiders," writes his observer. ". . . he had practically no body at all, and could span three inches with his legs." In conclusion, we would say that our descriptions do not pretend to full scientific accuracy; have indeed, perhaps, been affected by something of the Christmas holiday, something of the "just-so story" spirit! And, needless to add, the creatures seen are very much enlarged photographically.

BOOKS OF THE DAY.

EVERY now and then we take a step into the unknown—as when we begin another year, or open a book that spreads before us fresh fields of spiritual adventure. On New Year's Eve it might be well to consider how we shall regulate our reading in the coming twelvemonth; what we shall learn in 'thirty-three that we did not know in 'thirty-two. For the present there will be enough to go on with in the past year's literary produce, for the main harvest of 1932 will not begin until the spring publishing season. Personally, I still have a residuum of autumnal leaves from 1932, and I must sweep them up with all convenient rapidity, remembering that well-worn admonition: "If winter comes, can spring be far behind?"

Those who are now making good resolutions about their scheme of reading will find ideal guidance (not lists of "the hundred best books," but general reflections) in "THE COMMON READER," Second Series. By Virginia Woolf (Hogarth Press; 10s. 6d.). This is far the best collection of literary essays I have seen for many a long year. Its charm lies in the obvious pleasure and interest felt by the author herself in the books and people she discusses. There is nothing here that is pedantic or pontifical: it is all pure enjoyment. Her range of subject is wide, from the Elizabethans, and some famous figures of the eighteenth and nineteenth centuries, down to Mrs. Browning, Christina Rossetti, George Meredith, and Thomas Hardy. One allusion to the strangely diverse effect of a great war on various writers has a special relevance to-day. "The French Revolution," she recalls, in the essay on Mary Wollstonecraft, "took some people and tore them asunder; others it passed over without disturbing a hair of their heads. Jane Austen, it is said, never mentioned it; Charles Lamb ignored it; Beau Brummel never gave the matter a thought. But to Wordsworth and Godwin it was the dawn; unmistakably they saw

France standing on the top of golden hours,
And human nature seeming born again."

Contemplating our own world, we realise that it is inadvisable to put too much faith in such a renaissance.

It is common knowledge among publishers that a new book often "catches on" through being talked about, and so the "common reader" is to some extent the cause of its success. The public, in short, gets the best-sellers it deserves. Casual remarks, made when "two or three are gathered together," to the effect that the latest novel or memoir is "too marvellous," should therefore not be uttered lightly. Mrs. Woolf, with her experience of publishing, puts this point extremely well. In her final essay—"How Should One Read a Book?"—she says: "We have our responsibilities as readers and even our importance. The standards we raise and the judgments we pass steal into the air and become part of the atmosphere which writers breathe as they work. An influence is created which tells upon them even if it never finds its way into print. And that influence, if it were well instructed, vigorous and individual and sincere, might be of great value now when criticism is necessarily in abeyance; when books pass in review like the procession of animals in a shooting gallery, and the critic has only one second in which to load and aim and shoot, and may well be pardoned if he mistakes rabbits for tigers, eagles for barndoor fowls, or misses altogether and wastes his shot upon some peaceful cow grazing in a further field." Them's my sentiments exactly, but I venture to think that even the hastiest reviewer will never mistake a Woolf for a lamb in lupine habiliments!

What a good starting-point we might get for a course of reading, in tune with current thought, if we could share the experiences of the best living writers, and know what books have been a formative influence in their mental development! Authors, unfortunately, seldom admit us to these secrets, but one at least acknowledges his debts to poetry, in "TEXTS AND PRETEXTS." An Anthology with Commentaries. By Aldous Huxley (Chatto and Windus; 7s. 6d.). Many people have compiled anthologies, but few explain the grounds of their

selections, or disclose the effect on themselves, thus doubling the interest. Mr. Huxley realises this fact, and his self-revealing commentaries place the book far above the average of its kind. His extracts are classified under many and various headings, such as love, physical passion, marriage, money, God, death, and conclusions. The list of authors quoted contains over a hundred names, including French, Italian, and Latin poets as well as English. Among those most largely represented are Matthew Arnold, Baudelaire, Blake, Coleridge, George Herbert, Milton, and Shelley. Here, again, we get stimulating ideas on the use of books. "To be well informed, one must read quickly a great number of merely instructive books. To be cultivated, one must read slowly and with a lingering appreciation the comparatively few books that have been written by men who lived, thought and felt with style."

Of verse-collections without such personal notes I

Sympathy and enthusiasm have likewise gone to the making of the "ANTHOLOGY OF EMPIRE." Compiled by Anthony Haslam (Grayson; 6s.). "I have included the quotations," writes Mr. Haslam, "because I enjoy them so much myself." By "the quotations" he evidently means the short extracts from speeches, histories, and other sources interpolated between one poem and another, as, for example, these words spoken by William Pitt in 1805—"England has saved herself by her own energy; I hope that she will save Europe by her example"—a sentiment appropriate on the threshold of 1933. The compiler has cast his net wide, not only over English verse, but also that of Scotland, Ireland, Wales, and the Dominions, together with expressions of a still more local feeling, such as Hawker's "Song of the Western Men." The book contains 270 complete poems by 150 poets, with 220 extracts from the works of 150 other authors. It is dedicated, by permission, to the Prince of Wales, and every copy sold benefits the funds of the British Legion.

Mr. Aldous Huxley has in his anthology one item—and that very significant—under the heading of "Progress." It is drawn from an Elizabethan poet, Thomas Bastard, who, in reference to the inventions of printing, the compass, and gunpowder, says:

The first and riper world of men and skill
Yields to our later world for three inventions;
Miraculously we write, we sail, we kill,
As neither ancient scroll nor story mentions.

Among inventions wherein the Elizabethan age yields to our own is a kind of "sailing" in a new element—the air—with potentialities of killing that make Hotspur's "villanous saltpetre" hardly more formidable than a Christmas cracker. While we may hope that the murderous side of mechanical flight will not be practically developed next year, or, indeed, in the years to come after, we can look forward to progress in that great invention for peaceful purposes. What new air triumphs will 1933 produce?

To the recent history of civil aviation three notable books have been added. Mrs. Mollison's great adventure to the Cape and back gives a topical value to her husband's reminiscences—"DEATH COMETH SOON OR LATE." By J. A. Mollison. With Foreword by Amy Johnson (Mrs. Mollison); sixteen illustrations and a Map (Hutchinson; 10s. 6d.). This is a delightful autobiography whose humour and cheerfulness belie its sombre title. Everyone ought to read it, to understand the gay courage of our aerial adventurers, rivaling any Elizabethan sea-dog. "The future of transport," Mr. Mollison concludes, "lies to a large extent in the air. If the flights I have made have in any way assisted aviation, then I am more than satisfied."

Henley might have added some stirring stanzas to his "Song of Speed" if he could have read "HIGH SPEED AND OTHER FLIGHTS." By H.M. Schofield. 14 illustrations (John Hamilton; 15s.).

Here we have a thrilling account of the author's war and post-war flying experiences, including some crashes, by a member of the victorious British Schneider Trophy team of 1927. He ends with a glimpse of the future, when one of his children, used to flying at 600 m.p.h., may remark: "Isn't it funny the way the old man gabbles about the 375 he did on those funny old kites in his feeble slow-speed flight?"

Lastly, I come to a book that recalls a historic tragedy of aeronautics—"LORD THOMSON OF CARDINGTON." A Memoir and some Letters. By Princess Marthe Bibesco. With eight illustrations (Cape; 7s. 6d.). As I read these sensitive pages, I see again that heartbreaking procession of forty-eight coffins move slowly along Aldwych and turn the corner into Kingsway past the Air Ministry. Princess Bibesco's devout personal tribute derives its charm from such feelings as those expressed by Shelley—

Our sweetest songs are those that tell of saddest thought.

It throws intimate light on an inspiring personality. We in this country will remember Lord Thomson as one who believed, and died in the belief, that the future of England is in the air.
C. E. B.



JAMES I. AND ANNE OF DENMARK BECOME FREDERICK AND ELIZABETH OF BOHEMIA; WHO BECOME CROMWELL AND THE FIGURE OF JUSTICE: AN EXAMPLE OF A PALIMPSEST ENGRAVING.

It was not until about 1660 that the practice became general, from motives of economy and the need for speedy reproduction, of altering the plates of portraits. This example is of particular interest, since in state 3 (right) nothing remains of state 1 (above). The link between them in state 2 is the small pictures of the coronation of Frederick, who married Elizabeth, daughter of James I. In state 3, which is a Dutch broadside, a caricature head of Cromwell has in every case been substituted for that of Frederick. Further instances and information are given on the opposite page.

Reproductions by Courtesy of the Marquess of Sligo.

have two valuable examples—one educational, the other patriotic. The former is "AN ANTHOLOGY OF POETRY FROM SPENSER TO ARNOLD." Edited by William Wits, M.A. (Oxon.), Senior English Master, the High School for Boys, Hereford (Macmillan; 7s. 6d.). The editor's primary object has been "to provide in a convenient and compact form poems included in the General English Literature syllabus for the School Certificate Examination of the University of Cambridge." This sentence sounds rather academic and forbidding, but it is soon apparent that Mr. Wits is no dry pedagogue, but has approached his task with human sympathy and a desire to kindle a taste for poetry. Contrasting the varied delights of such an anthology with intensive study of prescribed texts, he says: "Not infrequently, the young pupil becomes so sated with the 'set' book that he secretly resolves that, the examination over, he will never look at the abhorred text again. . . . We must be on our guard lest the fear of Tennyson be realised when he said, 'They use me as a lesson-book at Schools, and they will call me 'that horrible Tennyson.' I well remember one such bugbear in my early school days. Happily, it was nothing more memorable than Goldsmith's "Deserted Village."



QUEEN ELIZABETH BECOMES JAMES I.: A TRANSFORMATION BY AN ENGRAVER WHO DID NOT WISH TO WASTE A COPPER PLATE.

This is an early example of a palimpsest engraving or altered plate. Queen Elizabeth is seen on the left, seated on a throne surmounted by the Royal Arms. On the right her head, costume, and Arms have been altered to those of King James, and the rest of the design retained.

QUEEN ELIZABETH BECOMES JAMES: PORTRAIT-CHANGING BY ENGRAVERS.

REPRODUCTIONS BY COURTESY OF THE MARQUESS OF SLIGO.



PRINCESS CLEMENTINA SOBIESKI TRANSFORMED INTO QUEEN CHARLOTTE: ANOTHER EXAMPLE OF AN ENGRAVER'S ECONOMY.

The granddaughter of John Sobieski, King of Poland, and wife of the Old Pretender, has been altered to Charlotte, George the Third's Queen. Only the features and hair have been slightly changed and the ornaments removed.



LOUIS THE FOURTEENTH'S HEAD IS REMOVED AND HE BECOMES OLIVER CROMWELL; THEN CHARLES I.; AND FINALLY OLIVER CROMWELL AGAIN.

There are in existence three earlier states of this plate, bearing, respectively, an earlier portrait of Cromwell, a headless state, and a slightly different portrait of Louis XIV. It will be seen that in the fourth state (left) Louis the Fourteenth's features are partially erased. The first

four states of the plate (at least) were by the engraver Pierre Lombart, who "lifted" the horse and rider from the famous Van Dyck picture of King Charles I. under an archway. The history of this most interesting engraving is told in "The Headless Horseman," by G. S. Layard.



QUEEN VICTORIA WITH LORD MELBOURNE BECOMES QUEEN VICTORIA WITH THE PRINCE CONSORT: THE LATEST ALTERED PLATE KNOWN.

This is the latest altered plate known. The reproduction on the left shows a mezzotint, dated 1841, of Queen Victoria riding in Windsor Park with Lord Melbourne. Raising his hat is Lord Conyngham, while the Earl of Uxbridge, the Hon. George Byng, and Sir George Quentin are

riding behind. Eleven years later, at the time of the Universal Exhibition, the plate was re-issued (right) over the title "Royal Recreation," the figure of the Prince Consort replacing Lord Melbourne. On the print is the entirely false statement, "Painted from Life."

Included in a current exhibition at the Burlington Fine Arts Club is a most interesting selection from the Marquess of Sligo's collection of engravings from altered plates. As mentioned on the opposite page, where a further example is shown, the practice of altering plates became general in the seventeenth century and lasted until the nineteenth. To quote from a note by Lord Sligo on his collection: "One of the principal reasons for making these alterations was economy. A large copper plate was very costly, and took a considerable time to engrave. If, therefore, an engraver could utilise an old plate, it saved

him much labour and expense. Another reason for the alterations was the need for speedy production. . . . The print shops represented the pictorial Press of the present day, and met the demand for the portrait of anyone who came before the public notice. . . . The essential point in the production of these portraits was that they should appear quickly while public interest was in existence. In these circumstances, therefore, a plate already engraved with a figure that could be adapted with slight, or even substantial, alterations, and be passed off on an unsuspecting public as a new portrait, was immensely valuable."



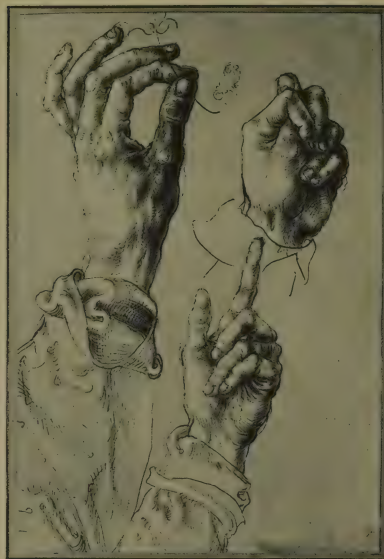
A MAN'S HANDS HOLDING A POMEGRANATE: A STUDY FOR THE POSTHUMOUS PORTRAIT OF THE EMPEROR MAXIMILIAN (1519).



A MAN'S HANDS: STUDIES FOR ST. DOMINICUS IN THE "FEAST OF THE CROWN OF ROSES."

The Albertina Collection, in Vienna, has just enlarged its famous collection of Dürer drawings. The Curator, Alfred Stix, has been able to purchase some entirely unknown originals by the master. Six of them are studies of hands—extending over the whole of Dürer's life. The language of the hands evidently interested the master, and he found endless possibilities in the play of the fingers and joints. The earliest shows Dürer's own hand three times—as we see them in the youthful self-portrait in the Louvre. They are the narrow hands of the twenty-two-year-old artist, and are still Gothic in character. On the reverse,

UNKNOWN DÜRERS BROUGHT TO LIGHT: STUDIES BOTH MASTERLY AND REVELATORY



STUDIES OF DÜRER'S OWN LEFT HAND (1492): THE EARLIEST OF THE NEWLY-DISCOVERED DRAWINGS.

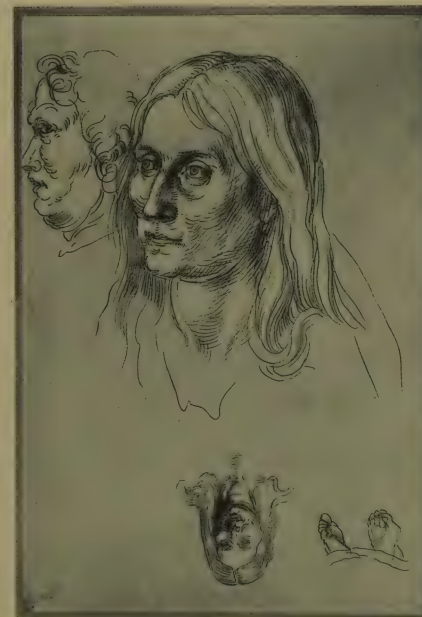


A STUDY OF DRAPERY (1508-15): A BRUSH DRAWING ON A BROWN BACKGROUND.

there are three heads. The largest of these is a study for a portrait of a youth with long hair, which has come down to us, if not in the original, at least in an old copy, in the Darmstadt Museum. On the next sheets are hands of a man and a woman—brush drawings on tinted paper with high lights. These were made in Venice in 1506 and are studies for the magnificent picture of the "Feast of the Crown of Roses," which is in Prague to-day. The female hands belong to the Madonna who crowns the Emperor Maximilian; the male hands to St. Dominicus. Dürer's style has completely changed. The forms are round. The Northern



HANDS FOR THE MADONNA OF THE "FEAST OF THE CROWN OF ROSES": STUDIES MADE IN VENICE IN 1506.



STUDIES OF HEADS (1493)—THE LARGER ONE SIMILAR TO A PICTURE NOW AT DARMSTADT.

master has come under the influence of the South. A further couple of drawings prove how Dürer made use of his Italian travels in his work in the following years. One represents a woman's hands folded, hands doubtless destined for the Virgin under the Cross, and full of extreme pathos. The second of the two drawings represents a drapery. Both belong to the same period, to judge by their style of drawing. They belong to the years 1508-1510. The last two drawings in order of time are typical late Dürer works. Again they show a woman's hands and a man's; but form and technique have changed. Dürer



HANDS FOR A MADONNA WITH THE INFANT: AN ETCHING MADE IN 1520; THE LATEST OF THE DISCOVERIES.



A WOMAN'S HANDS FOLDED: STUDIES FOR THE MADONNA UNDER THE CROSS (1508-15).

draws with charcoal on light paper, without high lights. The man's hands hold a pomegranate, the symbol of the Resurrection. They are drawn from nature for the posthumous picture of the Emperor Maximilian, of 1519. The woman's hands are those of the Madonna with the Infant, an etching from the year 1520, a work which is the latest of the discoveries in date. In this case, with a minimum of material, everything possible is depicted. The line is highly spiritualised. Light plays over the skin. A new artistic freedom has been attained. One feels inclined to compare them to the drawings of Rubens.

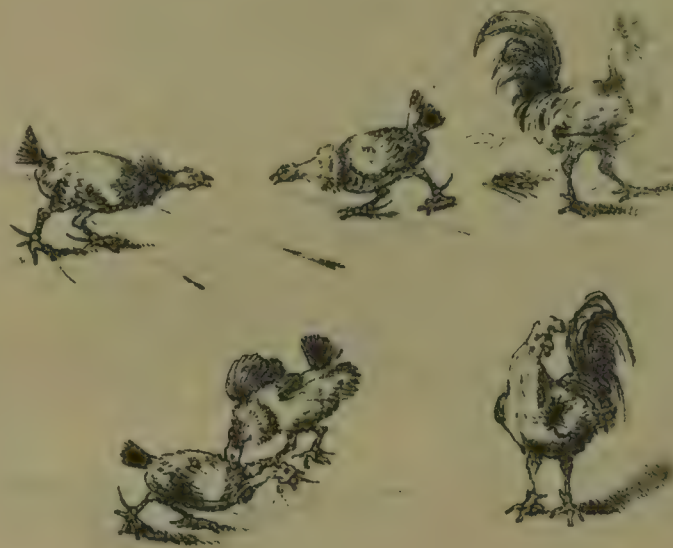


"Fly up, fly up, fly up
My bonny gray cock,
And crow when it is day."—Old Ditty.

A RECENT talk on this page about alleged cock-fighting furniture led me to remark how notable an observer of animals, and particularly of birds, was Henry Alken—and that, in its turn, sent me prowling round to lay my hands on evidence to justify my opinion. Among much else, I have been reading "The Annals of Sporting and Fancy Gazette" for the first half of 1822, and would ask you to share with me my surprise at the discovery that at so comparatively early a date, and during so brutal a decade, a popular sporting journalist considered it necessary to devote much space and some eloquence to debating whether cock-fighting ought to exist at all—"whether it may be deemed worthy of being continued in practice, by a people ambitious of the character of superior light and humanity—for," says he, "the inferior animals are possessed of feelings, are capaci-

artist at 26, Haymarket, at a wage of 30s. per week, and provided for a by no means sophisticated public a series of prints and sketches, some serious, some blatantly humorous (e.g., "Symptoms of Being Amused," which I have already noticed on this page), but all carried out with a fidelity and genuine gusto which is wholly admirable. All this period round about the 1820's seems extraordinarily vivid. The Regent is now King, and no more admirable than before; the Great War is over, but not the consequent economic distress; at the top of the ladder at the Academy is the enormously competent Sir Thomas Lawrence; and running about the streets, observing odd types, attending race-meetings and

flatteries of pretty women and handsome men. Of his purely cock-fighting prints, Fig. 3, from a well-known set of four, is an excellent example of Alken's singular competence. You may say that any



1. TWO PAIRS OF FIGHTING-COCKS, AND SINGLE BIRDS: PENCIL IMPRESSIONS ABLY EXECUTED, REPRODUCED IN A SPORTING SKETCH-BOOK OF HENRY ALKEN'S DRAWINGS, PUBLISHED IN 1817.

The full title of this rare collection, which is of the greatest interest to anyone who is attracted by H. Alken or his period, is "Sporting Sketches; consisting of subjects relating to Sports of the Field... the whole illustrative of Landscape Scenery."

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prize fights, plunging into every popular diversion, are a few men of Alken's calibre, who, somehow, for all their limitations, give us a more truthful notion of what English people really were than do Lawrence's subtle

wielder of a pencil can draw a brace of birds, but by no means every would-be artist can organise the space at his disposal with such economy of line as is evident in this print. You may also say that such a subject is fit only for the parlour of a country pub—in which case, you would have to banish from your bookshelves, if you were logical, a somewhat low Cockney comedy entitled "The Pickwick Papers" and the novels of Surtees, which also lack refinement. (By the way, it has just occurred to me that there is no mention of cock-fighting in "Pickwick"—Dickens, heaven knows, was no sportsman, but if, in the 1830's, cock-fighting was not already being regarded as beneath contempt, so ardent a reformer would surely have mentioned it.)

Fig. 1 is from a rare collection issued in 1817 by S. and J. Fuller, of 34, Rathbone Place, entitled "Sporting Sketches, consisting of Subjects relating to Sports of the Field," which I recommend to anyone who may care to delve a little further into the obscure life and not so obscure work of Henry Alken. It contains a great number of studies of men, horses, dogs, deer, and birds, in repose or violent action, carried out with singular efficiency. They are not in any way profound, and they exhibit no sentiment whatever, but they are extraordinarily good as illustrations of types, both human and animal, which are no longer in existence—John Bullish gentlemen and the old breed of bulldog, for example. As for these sketches, you have in them all the valour of these brainless and bloody-minded creatures.



2. SETTING ON THE BIRDS: A CONTEMPORARY RECORD OF THE BEGINNING OF A COCK-FIGHT, IN H. ALKEN'S SKETCH-BOOK PUBLISHED IN 1817.

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tated by nature to enjoy pleasures, and to endure pains, like ourselves: and, therefore, their right to compassion stands on the same foundation as our own."

He condemns as barbarous the ancient and respectable Shrovetide game of cock-throwing—that is, "of throwing heavy clubs of wood at the miserable victim bound to the stake, by which he is bruised and wounded, his limbs broken, and he is gradually tortured to death—such is no fair or legitimate sport, but, without positively recommending or writing a panegyric on the ancient practice of cock-fighting, it may be fairly designated as of a very different nature and character to the former. The birds themselves have an irresistible native propensity to these combats; they need no incitement thereto, and cannot be compelled to fight against their own inclinations. It is, therefore, their own act and deed." I wish I had space for more, for the argument is ingeniously developed, and the style inimitable: incidentally, the writer reveals that he has, as a schoolboy, acted as feeder and setter to a fighting tom-tit, with a wig-box as a pit!

However, the country's conscience—what our writer would call its "moral optic"—decided in 1849 that cock-fighting must be abolished, and since then, with notable and illegal exceptions, this so-called sport has been the pursuit of the mild antiquarian.

Let us, before my pen runs away with me, get on to Alken. Great artist—no: great caricaturist—no: but a singularly competent draughtsman, who is admired by the modern sporting fraternity for his vigour and accuracy, and, to my mind, deserves rather more credit than he is allowed by the average art critic.

One must not expect too much from a man who, in his early days, lived as Thos. Maclean's tame



3. THE COCKS FACING EACH OTHER WITHIN THE PIT: AN ALKEN PRINT IN WHICH THE SPACE IS CLEVERLY ORGANISED WITH GREAT ECONOMY OF LINE; AND OF INTEREST AS REPRODUCING SO ACCURATELY THE CONTEMPORARY DETAILS.

This print is the first of a series illustrating cock-fighting. It was published on September 1, 1841, by R. Ackermann, at his Eclipse Sporting Gallery, 191, Regent Street.

Reproduced by Courtesy of Messrs. Ackermann, New Bond Street.

COCK-FIGHTING AS IT IS IN BALI: THE "MYSTERY" OF ORIENTAL COCKING.

COCK-FIGHTING is a popular "sport" in Bali, and is regarded as the surviving reminiscence of blood-sacrifices. At various kinds of temple feasts the fights are obligatory, but, as the European Government has prohibited them generally, and only allows them by special permit on special occasions, the cock-fights have become much rarer now than they were in the past. Bets are made not only between the owners of the birds, but also by the onlookers. A steel spur (tadji) is bound to the right leg of the fighting-cocks, and there are

(Continued below.)

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ONCE A "ROYAL" SPORT IN ENGLAND, AND STILL ENORMOUSLY POPULAR IN BALI: A COCK-FIGHT DRAWS A BALINESE CROWD TO THE COCK-PIT, WHERE HEAVY BETTING IS CARRIED ON.



A FIGHTING-COCK IN TRAINING: THE BIRD BEING GIVEN A BATH BY HIS FEEDER—ONE OF THE MANY INTRICATE FEATURES OF THE COCK-FIGHTING "MYSTERY."



A CHARACTERISTIC AND BRUTAL FEATURE OF COCK-FIGHTING SINCE THE TIME OF THE ANCIENTS: A BALINESE FEEDER (TRAINER) AND HIS ASSISTANT FITTING THEIR BIRD WITH ITS SPUR.



KEEPING FIGHTING-COCKS IN TRAINING: A FEEDER TAKING FOUR BIRDS FOR AN AIRING—EACH IN ITS CAGE; WITH A SEPARATE FOOD-CONTAINER.

Continued.]

fixed and most rigid rules, breaches of which are heavily penalised by fines. Everyone in Bali is enthusiastic about cock-fighting, and some specially lucky people are very often in possession of "lontar" writings (ancient palm-leaf books) dealing with the colours and other peculiarities of superior birds likely to win.



THE GLADIATOR-COCKS IN BARRACKS: THE BIRDS TAKING THE SUN IN CAGES—TO BE SEEN OUTSIDE ALMOST EVERY COMPOUND IN BALI.

The fighting time of the birds is regulated by a kind of water-clock that is not set working until one of the cocks is knocked down, just as in boxing a "knock-out" is counted only after one contestant has fallen. If the cock fails to get up in time, a copper gong sounds his defeat.

RUSSIA AGONISTES.

BEING AN APPRECIATION OF
"MEMOIRS OF A BRITISH AGENT": By R. H. BRUCE LOCKHART.*
 (PUBLISHED BY PUTNAM.)

MR. LOCKHART has an unusual story to relate of the East, Near and Far, and he has a highly attractive manner of telling it. Merely as a narrative, this book has exceptional merit; for the author, by the aid of a charming and unaffected style, has the knack of infusing liveliness into small things as well as great. Many of the descriptive scenes from Russia, such as the picture of old Kieff and its semi-barbaric observances, are most vividly presented; and the same may be said of the many personages, of all nationalities, who throng these recollections of momentous days.

There are undertones in the minor key, for, truth to tell, the story, in its personal aspect, is one of lost opportunities and of incomplete achievement. Mr. Lockhart, however, is so candid about his own shortcomings that he would disarm criticism if he did not succumb to a mood of sentimentality which sometimes becomes oppressive. A tendency to romanticise himself in somewhat uncomfortable situations diminishes the sympathy which we should otherwise feel for his vicissitudes.

Romance, however, was doubtless his by right as a Celt, and in the youthful mood of romance (fostered by Pierre Loti) he approached the magic land of Malaya. Romance met him more than half-way in the person of the Princess Amai (we are not quite sure of her status, but let us think of her as a princess), a character out of Conrad, who was abducted from an outraged royal court, and for whose sake Mr. Lockhart tells us that he was prepared to embrace Mohammedanism. Malaria rudely intervened, and so, for the nonce, ended first love and rubber-planting.

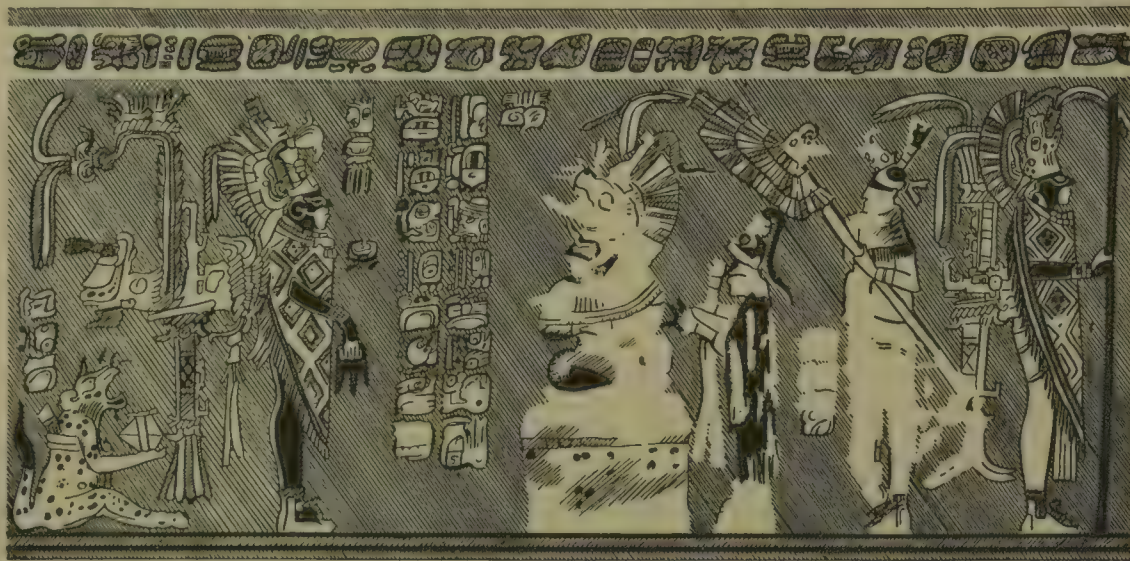
Belying medical predictions, Mr. Lockhart recovered from his malaria and entered the consular service. It seems that romance had marked him permanently for her own, for his first post was at Moscow—fabled city in a fabled land! Mr. Lockhart conveys most feelingly the glowing, ceaseless pageantry of pre-war Moscow. But beneath the garish brilliance we feel the essential rottenness which before long was to bring all in ruins. Everywhere was the worship of the Golden Calf. "I had entered into a kingdom where money was the only god." At the one end of the scale was life very near to the brutes, at the other end life in this guise: "The restaurant itself was a maze of small tables. It was crowded by officers in badly cut uniforms, Russian merchants with scented beards, German commercial travellers with sallow complexions and close-cropped heads. And at every table a woman, at every table champagne—bad champagne at twenty-five shillings a bottle. At the hotel end of the room was a high, balustraded dais, where an orchestra, resplendent in red coats, crashed out a Viennese waltz with a frenzy which drowned the popping of corks and the clatter of dishes and finally, by its increasing furore, subdued the conversation. And in a little pulpit all for himself, the Mephistophelian figure of Konchik—Konchik, the leader of the orchestra, Konchik, the prince of cabaret violinists, Konchik—by that strange law of Nature which decrees that every leader in Russia shall be foreign—the Czech." Frenzied entertainments on the Arabian Nights scale, carousals, all-night gipsy parties, everlasting sweet champagne and bitter erotics—there is a certain air of desperation about it all, the kind of desperation which doubtless Belshazzar and his guests felt in an acute degree. Mr. Lockhart was not sorry to be obliged to seek a contrast in office drudgery. Despite a certain sorcery which old Moscow undoubtedly exercised, and which this writer skilfully communicates, all that he tells us of Russian social life in 1913 suggests the last self-delusions of a doomed and expiring régime.

It may be imagined, and indeed it is well known, into what an unhealthy hysteria all this emotionalism flamed at the outbreak of war. Few who knew the Russians were deceived by it; and the reaction was swift. In a few months, "confidence in the Russian arms had given way to a conviction of German invincibility, and in every section of the Moscow population ruled bitter resentment against the alleged pro-German policy of the Russian Government." Disappointment vented itself in frantic anti-German riots and pogroms. It is needless to reiterate the tale, now so well known, of miserable disintegration under the disastrous combination of Tsar, Tsarina, and Rasputin; it is one of the blackest pages in modern history, and, familiar though it is, it gains a new melancholy interest from the observations of this close and privileged spectator. By the end of 1915 Mr. Lockhart

had lost confidence, and felt convinced of the coming débâcle. For that matter, it was hidden from nobody except the Court. "In St. Petersburg and even in Moscow the war had become of secondary importance. The approaching cataclysm was already in every mind and on everybody's lips. The ruling class, awakened at last to the impending disaster, sought to warn the Emperor." The storm broke, "and in a night a bread-riot, similar to hundreds which had taken place during the previous twelve months, had become a revolution."



"THE MOST IMPORTANT EXAMPLE OF ANCIENT MAYA CERAMICS" YET DISCOVERED: A CYLINDRICAL JAR, 9 INCHES HIGH AND NEARLY 6 INCHES IN DIAMETER, BEARING, TO THE RIGHT OF THE FIGURE, TWO COLUMNS OF DATE HIEROGLYPHS.



A PEN-AND-INK DRAWING OF THE CYLINDRICAL JAR REPRESENTED AS THOUGH FLATTENED OUT; SHOWING (LEFT, CENTRE) THE TWO COLUMNS OF DATE GLYPHS, DECIPHERED AS EQUIVALENT (PROBABLY) TO 120 B.C. Excavations at Uaxactun, in Guatemala, have brought to light ancient Maya graves of peculiar importance; and we illustrate here the most interesting object found among their contents. It is a magnificent specimen of Maya pottery of the Old Empire period, bearing date hieroglyphs—the first ever found on a medium other than stone or stucco, and probably referring to an event that took place centuries before the vase was made.—[By Courtesy of the Carnegie Institution of Washington.]

"The revolution took place because the patience of the Russian people broke down under a system of unparalleled inefficiency and corruption." Inefficiency was succeeded by fine words which hardly attempted to butter any parsnips. The parsnips, indeed, were never even put in the pot. It is perhaps no discredit to men like Prince Lvoff and Kerensky that they were unable in a moment to

produce order out of chaos: supermen were needed, and were not available. Mr. Lockhart gives a pathetic picture of Prince Lvoff—a man almost comically unequal to his task. Of Kerensky he formed a more flattering estimate than the world has formed; but he does not convince us that Kerensky, however excellent his intentions, was much more than that common and dangerous type in politics—the rhetorical idealist who is the dupe of his own phrases.

Another Amai and another illness made it necessary for Mr. Lockhart to return to England shortly before the Bolshevik revolution, which he had long foreseen. Early in 1918, after much Cabinet deliberation, he was sent back to Russia with a small staff, for the extremely vague purpose of "establishing relations" between the Allies and the Bolsheviks. His task was something between diplomacy and reconnaissance, and it suffered from the first—perhaps was doomed from the first—from its ambiguous character. The Bolshevik leaders were conciliatory and almost friendly, though they were amusingly frank in their admission that they were quite prepared to make a convenience of the Allies against further German aggression—but without prejudice to their Jihad on Capitalism once the immediate danger was past. Mr. Lockhart was in constant touch with the Bonzes of Bolshevism, and his account of them is extremely interesting. This was his first impression of Trotsky, recorded in his diary at the time: "He struck me as perfectly honest and sincere in his bitterness against the Germans. He has a wonderfully quick mind and a rich, deep voice. With his broad chest, his huge forehead, surmounted by great masses of black, waving hair, his strong, fierce eyes, and his heavy protruding lips, he is the very incarnation of the revolutionary of the bourgeois caricatures. He is neat about his dress. He wore a clean soft collar, and his nails were carefully manicured. . . . His dignity has suffered an affront. He is full of belligerent fury against the Germans for the humiliation to which they have exposed him at Brest. He strikes me as a man who would willingly die fighting for Russia provided there was a big enough audience to see him do it." Further acquaintance did not lead Mr. Lockhart to revise this estimate of a firebrand whose "belligerent fury" was before long to be turned against his own countrymen and against the Allies, and who from the first showed himself to be an impossible colleague. A striking contrast is the "impersonal and almost inhuman" force of Lenin's personality, against which Trotsky was "as incapable of standing as a flea would be against an elephant." Among the other revolutionaries whom Mr. Lockhart met was "a strongly-built man with a sallow face, black moustache, heavy eyebrows, and black hair worn *en brosse*. I paid little attention to him. He himself said nothing. He did not seem of sufficient importance to include in my gallery of Bolshevik portraits. If he had been announced then to the assembled Party as the successor of Lenin, the delegates would have roared with laughter. The man was the Georgian Djughashvili, known to-day to the whole world as Stalin, the man of steel."

Many were the excitements and fluctuations: Mr. Lockhart, for example, witnessed the battle between the Bolsheviks and the Left Social-Revolutionaries, and was actually besieged in the Opera House while the fighting was going on; but his "mission" was doomed to futility.

A number of people in England, in and out of the Government, were convinced that Bolshevism was the ebullition of a moment and that all the Bolshevik leaders were merely the hirelings of Germany. Mr. Lockhart did not take that view, and he was strongly opposed to intervention. That opinion was unpopular in London, and it does not pay British agents to hold opinions which are unpopular in London. All negotiations with the Bolsheviks were abortive, and as soon as England had intervened—by the comic opera method of landing a handful of troops at Archangel—the British agent's position was paradoxical to the point of absurdity, and certainly to the point of danger. Mr. Lockhart frankly recognises the inconsistency of his decision to remain in what had become an impossible position. It was only a question of time before he would be arrested on some charge or other; and the charge, when it developed, was thorough-

going—no less than complicity in the attempt on Lenin's life. Henceforth, as the villain of the "Lockhart Plot," he became the symbol of Albion's perfidy, and he was singularly lucky to escape execution. His imprisonment was alarming, but not cruel, and the timely action of the British Government in taking Litvinoff as a hostage saved him.

C. K. A.

* "Memoirs of a British Agent; Being an Account of the Author's Early Life in Many Lands and of his Official Mission to Moscow in 1918." By R. H. Bruce Lockhart. (Putnam; 9s. net.)

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THE CHRONICLE OF THE CAR.

BY H. THORNTON RUTTER.

Lighter Cars. There is one sure fact in regard to British-built motor-cars, and that is no designer feels perfectly satisfied with his own production. Thus each year brings the public

carried is frequently not taken into account. It is wonderful the difference made to a car climbing a hill when three people in place of the usual two persons are carried. It frequently means using a lower gear for cars of 12 h.p. and under. And even the "Sixteens" show some slowing down when extra weight is added to their load. Therefore, it is not difficult to see how greatly improved performances could be brought about if our cars were lighter than they are built at present. Some day, no doubt, we shall see 10-cwt. cars in place of 25-cwt. vehicles, with equally good and safe performances on the road.

Anti-Skid Devices.

The best device to prevent skidding is to have a well-balanced car. By that expression is meant a motor-vehicle with the weight evenly distributed, no great overhang beyond the rear axle, brakes adjusted evenly for each pair of wheels, and the tyres in-

flated to the correct pressure. To these items must be added the springing and suspension generally, including shock-absorbers. Cars with too flexible springs are apt to skid more easily than those with more rigid suspension. But, as a rule, it is the driver who causes a car to start a skid and not the car itself. When the road surface is slippery from frost, mud, or rain, one should never use the brakes suddenly nor apply them on a bend or curve, especially if the camber of the road is against and not helping the turn. Equally, one should never tighten up the shock-absorbers so that the springs cannot flex and heel over slightly on turns, in order better to distribute

the weight of the car and its load over the four wheels. When too stiff and all the weight is thrown on the two rear wheels, the car is apt to skid at turns at speed. Racing drivers always learn to make a car skid round or turn to increase the effect of the lock of the steering wheels. Private individuals are apt to wait until a skid arrives on its own account on the road before experimenting in producing skidding. Yet forewarned is forearmed, so that, while an experienced driver instinctively does the correct thing to rectify a skid, the novice is apt to have a mild crash in place of a few gyrations and going on his way unharmed. Therefore it is not a bad idea to have a little practice at Brooklands on the straight, or on a wide yet quiet road on a wet day. Skids can easily be produced by locking over the steering wheel when travelling fairly fast, or by putting on the hand or foot brake suddenly. Beyond telling a driver to steer into a skid—that is to say, if the tail of the car swings right, turn the steering-wheel to the right, and *vice versa*—one can give very little advice on paper. Also, release the brake if it is on at the moment of skidding, as the application is helping the skid.



IN PICTURESQUE LITTLE MILTON, OXON: A "GOLDEN" CROSSLEY AT A CHARMING LODGE.

something better for their money. The latest idea is to try to build much lighter cars, as these will travel faster with less power than heavy cars. Every pound avoirdupois of weight burns so many ounces of petrol at x miles an hour. Consequently, the lighter the car can be built, the more economical it will be. Recent investigations have produced a new light British metal of great strength which is called Beryllium, from ores obtained from Canada. This metal is lighter than aluminium alloys and twice as strong, according to the metallurgists. When the brittleness of this new metal has been eliminated, and it can be produced in a tougher quality, the laboratory experts hope to make it available for use in the construction of motor-cars, all-metal aeroplanes, and other machines. When I hear motor owners discussing the merits and faults of their cars of the same make, I notice in regard to the remarks that they make as to performance that the load



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Illustrations:

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HARBOUR.

Below—
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THE GREAT SOUND.



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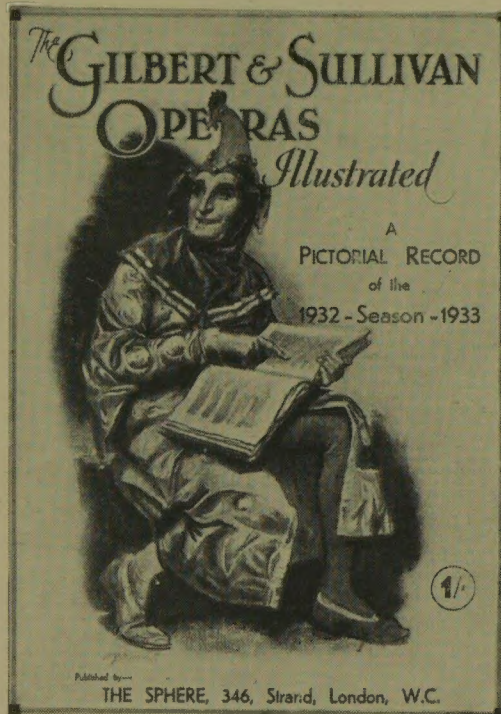
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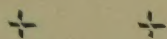
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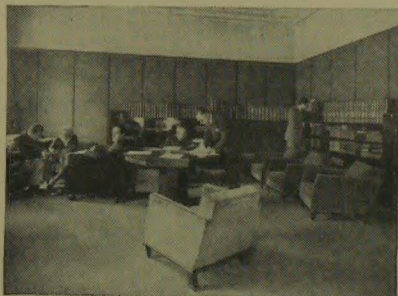
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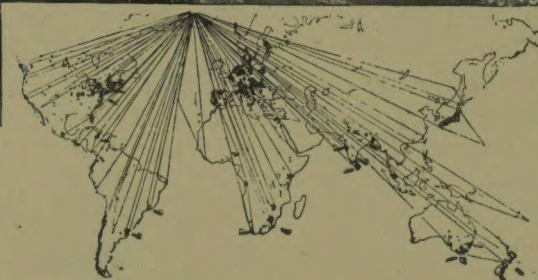


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